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MONTHLY REPORT

OF

THE DEPARTMENT OF AGRICULTURE,

FOR

JANUARY, 1868.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1868.

MONTHLY REPORT.

WASHINGTON, D. C., *February* 1, 1868.

SIR: I herewith report, for publication, the following matter, collated in January, including subjects as follows: Special Statistics of Farm Resources and Products; Table of Yield and Prices of Farm Products; Productions of California; Greensand Marl as a Manure; the Potato Bug; Comparison of Imports of Dry Goods; Extracts from Correspondence; the Liverpool Wool Trade; Linseed Oil and Cake; Manures in Great Britain; British Imports of Russian Wheat; Prices of Flour in London; Condensed Milk in Europe; Roquefort Cheese; Prussian Agriculture in 1867; Various Matters; and Meteorology for December, 1867.

Respectfully,

J. R. DODGE, *Statistician.*

Hon. HORACE CAPRON,
Commissioner of Agriculture.

SPECIAL STATISTICS OF FARM RESOURCES AND PRODUCTS.

A digest and analysis of returns, in response to the following queries, are herewith presented:

1. What is the average percentage of increase (or decrease, if cases of decrease exist) in the price of farm lands in your county since 1860?

2. What is the average value of wild or unimproved tracts of land? and what is the character, quality, and capabilities of such land?

3. What marked or peculiar resources have you in soil, timber, or minerals? and what is the state of their development, or inducement for attempted development?

4. What crops, if any, are made a specialty in your county? and what facts illustrating their culture, quantity, and the profit derived?

5. What kinds of wheat are cultivated? and which of them are preferred, and why? What is the time of drilling or sowing? For harvesting? And what is the amount and mode of culture? What proportion is drilled?

6. What grasses are natural to your pastures? How many months can farm animals feed exclusively in pastures? What would be a fair estimate, per head, of the cost of a season's pasturage of an average herd of cattle?

7. What are the capabilities of your county for fruit? What fruits are best adapted to your soil and climate? Give some *facts* concerning yield and profit.

It was not expected that subjects involving so wide a range and so extensive a field should be exhausted, scarcely even approached, but the design was to show the results of peculiar and various causes affecting prices of farms and wild lands; to compare the length of the pasturage season in different States and the differing seasons and modes of wheat culture; with such isolated facts as might be deemed of interest relative to certain specialties of production. Returns have been general, and a mass of facts elicited, from which the following statements are condensed. The eastern and middle States are included in this number,

and the southern and western will be considered in the February issue, with deductions from all the facts presented.]

MAINE.

1. An increase in the value of farm lands since 1860 is reported from nearly every county in the State, though not equivalent, with few exceptions, to the appreciation of gold. In Piscataquis county this increase is placed at fifty per cent.; in Cumberland, forty; Androscoggin, Somerset, and Oxford, twenty-five; Waldo and Kennebec, twenty; Sagadahoc, ten; Penobscot, seven; York, five per cent.

In some localities farms have been thrown upon the market, owing to the scarcity of farm labor, high taxes, and the opportunity to invest in untaxed government bonds. Increase in values is more marked in the vicinity of cities.

2. Tracts of unimproved land, divested of wood and timber to a considerable extent, of sandy soil, and growth of oak and pine, are held at from $1 to $10 per acre in Cumberland county. In Oxford county similar tracts, valued mainly for growing wood, are estimated at $8. In York rough pasture lands are worth $10 to $12. Average value of wild lands in Kennebec $12; growth, maple, beech, birch, pine, spruce, larch, and fir; cedar swamps becoming valuable; pine very remunerative; poorest lands swampy and ledgy, yet abounding in muck. In Somerset $5 per acre, the growth paying for the land In Lincoln $15, two-thirds of it good farming land. In Sagadahoc, at the mouth of the Kennebec, a lumbering county formerly, the average is put at $45, though timbered lands are worth $100. The soil, a clayey loam, is suitable for grass. In Penobscot $5. Wild lands in Piscataquis, the Moosehead Lake region, are somewhat rocky, yet capable of cultivation to some extent, and can be bought as low as $1 per acre.

3. The timber resources of Maine are not unknown. In Somerset county, west of Moosehead lake, lumber is yet abundant, mills plenty, and the product sent to market, the pine by water, the hard wood by railroad. Penobscot has been a great lumbering region, and has an abundance of peat. Cumberland county claims unsurpassed water power, awaiting improvement, "which will stimulate and develop the resources of the soil." Fine granite for building purposes abounds in Kennebec. Traces of iron are found in the rock formation, yielding a pigment used by mechanics in lieu of sienna. In Piscataquis are inexhaustible quantities of slate, plenty of iron, and some lead, silver, and gold. The iron interest, neglected during the war, is beginning to look up; slate quarries are doing a good business. The county lacks railroad facilities for the transportation of these products. York abounds in granite, and a fine article of tripoli is worked.

4. In Waldo county, which has a soil well suited to the potato, the cultivation of this esculent is made a successful specialty. Hay and potatoes are extensively shipped from this region, and, in fact, from other sections of the State. In Kennebec the potato yield is estimated at 150 bushels per acre, worth $165 at the railroad depots.

In Oxford hops are considerably grown, one man (T. P. Duston, of Bethel) having produced 3,800 pounds from three acres, which he sold at home for $1,900.

In Lincoln county hay is said to yield a profit of $6 per acre. After planting with corn and potatoes, with applications of stable manure, lands are seeded to grass with some kind of grain; and lands not ploughed are top dressed with ashes, lime, plaster, and superphosphate of lime.

The wool business is prominent in Somerset, and fine-wool sheep more abundant than elsewhere.

5. Among the varieties of wheat preferred are Canada and Wisconsin, Bald Spring, White Malaga, Canada Club, &c. It is very little grown. The time

of sowing is reported in York, Lincoln, Waldo, and Piscataquis, "May first;" Somerset, "May;" Sagadahoc, "last of April;" and others indefinitely, "April and May." Time of harvesting, York and Lincoln, "August;" Waldo, "August 1st to 15th;" Sagadahoc, Penobscot and Oxford, "August;" Kennebec, "early in September;" Somerset, "September."

It is significant that most of the counties expressly report "none" of the wheat drilled, while no county is credited with any portion of the crop as drilled.

The crop is almost exclusively spring wheat. In Cumberland, within a few years, premiums have been paid on forty bushels per acre; "twenty-five or thirty years ago wheat was one of the most profitable crops of this county, but its culture was at one time almost abandoned, owing to the ravages of the weevil, but its disappearance has encouraged some farmers to attempt its cultivation again."

6. The cost of pasturage varies greatly in the different sections of the State. The highest rate reported is $8 per head for six months; in Penobscot and Lincoln, $6 50; Cumberland, $6; Sagadahoc and Lincoln, $5 for five months; Somerset, $4 for six months. Pasturage for sheep is placed at fifty cents per month in Oxford county. About seven months feeding per year is required—from the end of October to the end of May. Red top, white clover and June grass, with other grasses, furnish the summer pasturage.

7. Apples are produced abundantly and cheaply throughout the State. A correspondent in Oxford mentions a small orchard from which $800 has been received. In Lincoln, instances of a yield of 200 bushels per acre are given, with a net profit of $50.

Hardy varieties of pears and grapes are grown in the southern counties. The Hartford Prolific, Concord, Delaware and Creveling, if laid down and covered in the winter, have ripened and yielded well.

NEW HAMPSHIRE.

The returns of this month from New Hampshire are unusually meagre, representing but three counties—a fact to be deplored, as many facts concerning special industries, and mineral and other resources would be interesting.

1. The increase in the value of farms is stated at 15 per cent. in Cheshire county; 10 per cent. in Sullivan and Belknap. The tendency, however, in the latter is said to be downward. The increase is generally attributed to the currency and the activities induced by the war. The growth of manufacturing has had a tendency to render farm property more valuable, but this extension enlarged the labor demand and raised the price to such an extent that farmers could not compete, and farms are neglected. But the difficulty is owing to spasmodic rather than healthy increase of manufacturing, and in a still greater degree to the emigration of the farming class to the rich lands of the west, making efficient farm labor scarce and high.

2. In Belknap the value of unimproved lands varies from $10 to $75 per acre. Manufacturing villages of recent growth and the building of lines of railroads have wonderfully increased the value of wood or pasture lands in immediate proximity, which were previously of little value. In Cheshire an average of $25 per acre is noted, the most valuable furnishing timber and hemlock bark. Wild lands in Sullivan are generally rocky and hard, much of it upon hills and mountains, more remote from railroads, and are worth about $5 per acre. If cleared up they would be of some value for grazing purposes.

4. No specialties of importance are reported. Hay in most sections is the principal crop. In some localities potatoes are extensively and profitably grown for shipment.

5. Spring wheat is almost exclusively grown. The varieties are almost as

numerous as the producers. Drilling is not practiced. Sowing is done from April 20th to May 20th, according to the soil and season. Harvesting commences between the 20th and the last of July, and continues to the middle of August.

6. The cost of grazing cattle in Sullivan is estimated at $3 50 per head for six months; in Belknap, about the same for the season, from May 20th to October 20th. In Cheshire the price is $4 for six months.

7. New Hampshire is an uncertain region for fruit production. Apples have sometimes been profitably grown. Belknap claims to be a good county for fruit, and with some show of especial reason, on account of the great extent of water surface in the system of small lakes south of the White mountains. One firm delivered in the town of Laconia, the past season, $3,000 worth of fruit trees. It is estimated that $10,000 has been expended in this county in ten years (mostly in five) for pear trees. One man in the town above mentioned receives $500 annually for pears and plums grown on two acres near the lake.

Grapes are grown in very favorable locations. One Isabella vine, near a lake in Belknap, produces annually 2,000 pounds of fruit. The vine is 22 years old, has 11 main branches from the same root, and a total length of vine of about 1,300 feet. It is located on high ground, a mile from the water, soil hard and rocky, the site well protected against winds. The soil is manured with a top dressing of well-rotted stable manure; the vine is laid down but not covered in winter, and the fruit generally ripens and sells for 20 to 40 cents per pound. This statement is reported by O. A. J. Vaughn, of Laconia.

VERMONT.

1. The increase in the value of farms ranges from 10 to 30 per cent.; the latter in Orleans county, the former in Bennington and Essex. Orange, 11; Addison, 15; Grand Isle, 12 per cent.

2. Unimproved lands are highest in Addison, a good section of the State, and a county famous for sheep husbandry, in which pasture lands are in demand. The average value of wild lands in this county is placed at $20; $5 in Essex; $6 to $8 in Washington; $8 to $15 in Orange; $10 in Orleans. In some of the counties these lands lie mostly among mountains, with a rough and rocky surface, and are well timbered with hemlock and spruce. The opening of railroad facilities and the establishing of lumber companies have doubled the value of timber lands in many places. Spruce, basswood, birch, cherry, white ash, butternut, and other species are used for lumber.

3. The disintegration of rock containing carbonate of lime is the source of fertility to soils in the western part of the State, and deposits of muck and peat abound. Soapstone, serpentine, chrome, and iron are found in Orleans. In Orange are copper mines, which have been worked to some extent. A slate quarry has recently been opened in West Randolph. In Monkton, Addison county, an extensive bed of kaolin is worked profitably. In Northfield, Washington county, granite and slate are largely manufactured for building purposes. Marble quarries are worked to advantage in Grand Isle and Rutland.

4. Grass, oats, potatoes, and wheat are the most reliable sources of profit to the farmer. A common rotation in Washington is as follows: First year, corn or potatoes; second, oats or wheat, (mostly oats;) then grass six or eight years. In one or two towns in Orleans hops are extensively grown; in some others potatoes, at the rate of from 100 to 300 bushels per acre. In three or four of these 50,000 bushels have been sold for starch, at thirty to thirty-seven cents per bushel. Dairies are sources of much income. Many Orleans farmers obtain 200 pounds of butter per cow. In Grand Isle wheat is assumed to be profitable, costing $1 50 per bushel, yielding at the present time $2 35, or a profit of eighty-five cents per bushel; and oats fifty cents, selling now at eighty cents.

5. Soule's winter wheat, and Siberian and Black Sea spring varieties, are preferred in some counties, on account of early ripening, by which rust and the midge are escaped. Scotch Fife is common in Orange. In Addison, Canadian White-flint, Red-chaff, and Red Mediterranean are sown in autumn, and in spring the Black Sea, Berlin, &c. The "Gold-drop" gives good satisfaction in Orleans, where spring wheat is grown exclusively, and the practice of bringing seed wheat from the west is common, and productive of good results. In Washington the Canada Club is preferred, as less subject to rust or mildew ; Tea and Black Sea are also grown.

Winter varieties are sown about the last of August or first of September, and harvested the last of July. Spring wheat is put in from the last of April to the 20th of May, and harvested in August. Our Orleans correspondent says he never saw a wheat-drill in the county; that the crop is reasonably sure if sown early, and the acreage is increasing, though but half the local supply is produced. The reporter in Orange alludes to using a one-horse drill last year, the first drilling of wheat of which he has any knowledge in New England. In Addison, summer fallowing usually precedes the sowing of winter wheat, and for spring sowing the ground is usually manured and ploughed in the fall.

6. Pasturing costs from $4 50 to $6, and in Bennington it is estimated at $8. About six months, or from five to six, is the average length of season, and $1 per month about the average price.

7. Reports are not generally favorable concerning fruits; apples, pears, and small fruits are produced with some success.

MASSACHUSETTS.

1. The increase in values, in most of the counties, is estimated at about an equivalent of the increase of gold—in some localities, less—in a few others, a little more. The largest increase has been in Berkshire, amounting to fifty per cent. ; in proximity to villages, seventy-five per cent.; in remote locations, thirty-five—about the same as in 1860, if calculated upon a gold basis. The attention of business men in New York has for several years been directed to the mountain air and scenery of Berkshire, and their improvements have increased the value of lands, especially in the vicinity of towns.

2. Some unimproved lands in Worcester county are reported at the low price of $6 per acre. Woodlands in Barnstable may be found at $5 per acre. In Hampden, rocky and swampy lands, with a sparse growth of wood, are worth $5. In Bristol are swamps which are rising in popular estimation, and are regarded, when reclaimed, as the most valuable grass lands in that region. In Suffolk are salt marshes worth, when ditched and made available for hay, $50 per acre. Swamps in Middlesex, susceptible of drainage, are made to yield large crops of Indian corn, potatoes, oats, or grass. Different classes of unimproved lands are thus estimated: Woodlands, cleared, $16 per acre; swamp lands, capable of drainage, $30; peat meadow, $75. These prices are greater than those of Barnstable, Bristol, and Hampden, by reason of proximity to Lowell and a circle of smaller manufacturing towns. In Berkshire, the best pine, hemlock, and chestnut growth are valued at $250 per acre; lands less densely timbered, at $50 to $75; in less accessible districts, among the mountains, the best woodlands, at $100; an average of $100 per acre for timber lands. When divested of timber, the roughest and most rocky tracts are scarcely worth more than $5 per acre. The planting of the locust is recommended as a profitable disposition of such lands.

3. Peat meadows are receiving much attention. Many have passed into the possession of manufacturing companies. The peat is pressed in a machine, dried, and used for fuel, especially in furnaces. In the town of Mansfield, Bristol county, a mine of inferior coal exists, not now worked. The varieties of timber common to New England are utilized most fully, but few peculiar resources of

soil or minerals contribute to the wealth of this State. The Berkshire mountain district, of varying elevation, averaging, perhaps, 1,500 feet, is underlaid with talcose mica, with detached ledges of lime. East of the Taconic is a limestone range, upon which are the towns of Adams, New Ashford, Lanesboro', Lee, Pittsfield, West Stockbridge, Egremont, and Sheffield, furnishing very good marble. The white marble of the national Capitol was obtained from this section. The Girard College, at Philadelphia, was furnished from Egremont. East of this lime ledge is a vein of hematite iron ore, probably extending from Vermont into New York, by a southwesterly trend. In Richmond is a mine that has been worked extensively for forty years, and is yet valuable. The Cheever mine, in the same vicinity, is successfully worked. The "Leet" has been continuously worked for thirty years, furnishing ore for furnaces in Richmond, Lenox, Hudson, (New York,) and other furnaces. Lime is largely manufactured in South Stockbridge, and sold at fifty cents per bushel for building purposes, while the lime ashes are readily purchased by farmers at seventeen cents per bushel. East of Lenox mountain the limestone and iron ore again occur, and to some extent in Stockbridge, Barrington, and Sheffield.

4. Grass is universally regarded as the most profitable farm crop. Indian corn, oats, and potatoes, are prominent. Gardening, near towns, is practiced successfully. Productions of the farm, orchard, and garden generally take as wide a range as the climate admits. For Suffolk county, the following statements are made: Hay yields 3,000 pounds to the acre; rye, cut and threshed by hand to save the straw, (worth as much as hay,) yields thirty bushels and 4,000 pounds of straw; cabbage, cultivated in rows, 8,000 per acre; potatoes, drilled in by plough, in rows thirty inches apart, every eye being cut separate and dropped nine inches apart in the row, from 200 to 300 bushels per acre, at thirty per cent. profit.

5. Wheat is little grown. Spring varieties are mostly sown. There is no report of the drill. The Tappahannock, from the Department of Agriculture, has been successful in some places as a winter wheat. In Bristol county some success has attended the culture, and twelve to sixteen bushels per acre obtained. The most popular varieties are some that have been disseminated by the department.

6. Pasturage in Suffolk county costs about $2 per month for neat cattle. In Barnstable, six months in pasture costs $8; in Worcester, $6; in Hampden, five months, $4. The season runs from five to six months, though some herds obtain a partial subsistence for a longer period. In the mountain pastures, June grass gives an early bite; orchard grass is also early and continues longer; red top is common, as also white clover.

7. As in other sections of New England, the apple crop is becoming precarious in Massachusetts. "Formerly there was a great quantity of apples, but of late years they have been blighted by the drought, worm, and other causes," is the record in Hampden; and "Berkshire," it is said, "in olden times was noted for its extensive apple orchards, but the old fixtures, planted by the early settlers, have nearly passed away." Many in this section of the State, as in more eastern counties, are putting out new orchards, and striving to secure a return of the old abundance. The canker worm has been very destructive for several years. Pears have met with some success here, and still greater on the eastern coast, and especially in the vicinity of Boston, where the soil and climate seem well adapted to their culture, which is made very remunerative, prices ranging as high as $20 per barrel. They yield well in Bristol, upon a stratum of clay found there. Peaches have nearly failed of late, as well as cherries.

RHODE ISLAND.

1. The increase in farm values is scarcely sufficient to cover the depreciation of currency. Newport county is reported at 33 per cent.; Bristol 25; Kent

10; Washington 7 per cent. Occasionally a wealthy gentleman will purchase a farm at a price exceptionably high for amateur or fancy farming, the advance being limited by the demands of the seller or the fancy or wealth of the purchaser.

2. There is necessarily but little unimproved land in Rhode Island. In the southern part of the State are swamp or bog lands that can be obtained at $10 per acre. There are rough lands in Kent of little value but for wood, worth $15. There is a little rocky or swampy land in Bristol and some woodland, nearly all of which is pastured. No wild lands are reported in Newport.

3. Few peculiar resources exist in this State. An inferior quality of anthracite coal is found in Kent and Bristol, offering no inducements for working. A mine is worked in Newport and found useful for smelting purposes. The soil of Bristol county is dark, heavy, with a stiff sub-soil deficient in sand, but strong and productive when properly manured and cultivated, and it does not leach. The soil of Newport is kept fertile by fish and seaweed fertilizers from the waters of Narragansett bay, from the shores of which the extreme borders of the county are scarcely three miles distant. A mixed husbandry is practiced to meet the demands of the home market.

4. The grass and hay crops are reckoned of most value, and generally used on the farms in the production of milk, butter, beef, and mutton. Potatoes and onions are in some localities cultivated for the West India market, with less profit of late than usual on account of the potato blight and onion maggot. Gardening on the borders of the Narragansett bay is found remunerative for the supply of neighboring manufacturing villages in Rhode Island and Massachusetts. Thirty tons of good manure, costing four dollars per ton, will secure, with proper care, five hundred bushels of onions and four hundred of carrots if not injured by smut and maggot. The onions are planted the first of April in rows twelve inches apart; the carrots on the first of June between the hills of onions, every third row. The onions are harvested about the first of August, when the carrots have ample time to mature. A crop of 10,000 bushels of potatoes and onions in 1867 are reported from Bristol county.

5. Very little wheat culture is attempted. Other crops are more remunerative as well as more abundant and certain. The White Flint, Tappahannock, White Mediterranean, and other kinds have been tried in Newport, but with little success. A red variety, which succeeded best, in the hands of the reporter, gave 16 bushels per acre on soil that would yield 50 to 60 bushels of corn or oats or 40 to 50 of barley.

6. Pasturage for the season of six to seven months is far more expensive in the more populous and improved portions of the State. It is estimated at $20 for Newport; Bristol $15; Washington $10; Kent $9.

7. Fruit culture is becoming precarious. Insects are more numerous. The canker worm and other insects are doing much injury to orchards and vines, especially near the salt water. Extremes in temperature in spring are injurious. Small fruits are fine and remunerative. The Rhode Island Greening, once the glory of all orchards, is not now produced in perfection.

CONNECTICUT.

1. Little change in the prices of lands is noticed, further than is caused by the difference in value of currency, except in proximity to growing manufacturing villages. In Windham county, it is claimed, prices of lands have varied little in fifty years.

2. A very small extent of swamp or peat lands are found in Hartford county. Their value is from $15 to $40 per acre. Muck is extensively used as a fertilizer. Small tracts of woodland sell for $25 to $150 per acre. A larger area of uncultivated land is found in Windham county, partly wooded, of some value

for pasturage, worth, on an average, $18. In Litchfield are rough pasture lands of low value and woodland valued at $20 to $50, according to the growth. In Tolland there is very little unimproved land.

3. Iron, copper pyrites, and silver are reported in Hartford county, but are not worked. In Litchfield county there are valuable beds of iron ore, the manufacture of which consumes most of the wood in the northwestern part of the county. The soil of the Connecticut valley is a productive alluvial; west of the river is a belt of rich clay loam; still further west is a good region for grazing and general farming; other sections contain the usual variety of soil and surface found in Massachusetts and Rhode Island.

4. Tobacco is a specialty in the vicinity of the Connecticut. A gross product of $1,000 per acre is sometimes realized; $300 to $600 are regarded as paying yields. The quantity obtained is often 2,000 pounds per acre. From $300 to $450 per acre profit on onions is occasionally received, upon a yield of 600 to 700 bushels. The growing of garden seeds by societies of Shakers and by joint-stock companies is extensively engaged in, and profits are presumed to be large. Corn and wheat are not generally profitable crops.

5. Wheat is scarcely worth mention, so little is produced, though both winter and spring varieties do very well, with proper care; red Mediterranean is generally preferred, as less liable to rust or lodge. It is sown from the first to the middle of September. It is sometimes put in after corn and potatoes, but generally follows tobacco. But a small proportion is drilled—not exceeding one-tenth.

6. The cost of pasturage in Windham county is placed at 30 cents per week, or $7 50 per season; in Hartford, $9; in Tolland, 16; in Litchfield, dairy cows 50 cents per week. Stock is usually pastured about six months, yet not exclusively more than five to five and a half months.

7. Fruit is more successful and abundant than in many other sections of New England. Apples are of the most importance, and some farmers can pay the entire expense of cultivating their farms with the proceeds of their sale. Peaches are less successful than formerly, being injured in many places by the "yellows." Pears, plums, cherries, and grapes are grown with fair success; and a large amount of small fruit, in the aggregate, is produced, and a portion sent to the New York market. In Litchfield peaches and plums are reported uncertain.

NEW YORK.

1. The average increase in the value of farms, upon the basis of thirty-two counties reported, is 28 per cent. It is not to be expected that land will fluctuate with the movements of the gold market; prices of real estate did not go up with the extraordinary rise in gold in 1864, nor fall with the tumble of metallic currency in 1865; and when specie payments shall be resumed, there is little probability that prices of farms will again recede in New York to the figures of 1860. The average of 28 per cent., in view of all the causes affecting values of real property, indicates an actual increase at the present time of, say, 15 per cent. since 1860; less in remote country places, but much more in the vicinity of towns. The tendency to congregate in towns is apparently greater than before the war or at any former period, and it is observed alike in all parts of the country. It is so, too, in Great Britain, though such has long been the case there; and it is especially the fact in France, causing much loss to production, and no little anxiety for the bread supply and the real welfare of the whole population. The increase is generally greater along the central lines of railways than elsewhere, is marked in Herkimer and other dairy districts, and greatest in the vicinity of Rochester, where it is estimated at 100 per cent.

In Seneca county the selling price is at least one-third greater than it was in 1860, and the anxiety to invest in real estate is becoming very marked. Farms which could readily have been bought for $70 now command $100 per acre. The improved methods of farming have been the main cause—under-draining

to a large extent, clearing, increasing the manure pile by feeding of stock, and the greater value placed upon the grass and hay crops. Some farms have been very much improved by the turning of the little creeks on the high lands for the purpose of irrigating, and the low lands are bettered by under-draining.

In Chautauqua county, many farms that, seven years ago, could have been bought for $50 per acre, would sell now for $150 per acre.

2. The reports of local averages of unimproved lands reduced to a general average, give $32 as the value of such lands in the State. In some cases they are more valuable than cultivated lands; in the mountains of the Adirondack region, and other mountainous localities, tracts of wild lands are found at low prices. In the more populous sections unimproved lands, with the exception of wood and timber preserves necessary to each farm, are either very hilly or swampy. In the northern part of Oneida the north woods, a wild tract of spruce with a very poor soil, is worth but $5 per acre. In the Catskill mountains, land valued only for bark and timber is held at the same rate. As near New York city as Dutchess county are mountain lands valued at only $10 to $20 per acre. There is a wild tract in Herkimer containing about one hundred thousand acres, worth from fifty cents to five dollars per acre, very hilly, full of lakes, and wooded with hemlock and spruce—a great resort for hunters and fishermen in appropriate seasons for such game. In Suffolk (on Long Island) is a large tract which produces quantities of cord-wood, 100,000 cords having been shipped from a single town (Brookhaven) in a single year, estimated at $8 per acre. In Washington county unimproved lands are valued at $3 per acre. Woodlands, in counties supplied only with wood lots reserved upon farms, are often the most valuable portions of farms, as in Livingston and other counties. In Monroe such lands are worth from $60 to $200 per acre.

3. The peculiarities of soil and minerals are too well known for particular mention. Timber that is conveniently accessible is getting scarce and valuable. In the western part of the State prices of wood and timber are rapidly increasing; in Ontario county the best lumber is worth $40 to $50 per M, and wood $4 per cord. Lumbering operations are rapidly reducing the supply. Millions of feet of the most valuable ship timber were hauled to the St. Lawrence river from Jefferson, rafted down to Montreal and Quebec, and sold to England for a trifle, and now the want of building timber is, or soon will be, felt severely.

In Westchester marble for building purposes is largely quarried and shipped to New York; and peat is also abundant, though unworked. A large amount of labor is employed in Warren in procuring bark for tanneries, and logs are floated down the branches of the Hudson for manufacture at Glenn's Falls, Sandy Hill and Fort Edward; there are also marble quarries successfully worked at Glenn's Falls. In Livingston and Greene plaster beds have been in process of excavation for several years, greatly to the advantage of agriculture in their vicinity. Cement and plaster beds have recently been discovered in Schoharie. In Ulster 700,000 barrels of cement were manufactured during the season. At least $1,000,000 capital is invested in quarrying Hudson river bluestone, which is shipped to all parts of the United States. Silver and lead are found in Dutchess county. Lime and building stone are valuable resources of Jefferson county.

4. A few items concerning special industries are extracted from returns of correspondents. During the war the flax interest became prominent, and some thirty mills were erected in Washington county; the business has greatly declined. In the central and eastern portions of the county potatoes are made a specialty, the yield being estimated at 1,000,000 bushels, of which 800,000 reached a market before winter set in, at 80 cents to $1 per bushel. Winter cars are fitted with stoves, and farmers were receiving $1 10 per bushel in December. The cost of culture is reckoned at $20 per acre, and the yield varies from 100 to 300 bushels. Some farmers have made almost fabulous

profits in producing the Goodrich and other new varieties. The most profitable in Kings county is said to be potatoes, upon highly manured ground, the product being marketed very early; and a second crop of cabbages, turnips, or wheat seeded. The rent of land for gardening is sometimes $25 to $50 per acre. In Queens and other counties near New York city, gardening and potatoes are the main specialties. In Dutchess and Westchester hay is valued as a profit-giving product.

In the southern portion of Oneida county the growing of hops is a prominent interest, but it was a failure last year on account of the prevalence of the hop louse. In Schoharie county 4,000 acres of hops are reported. Otsego generally produces $750,000 worth. Madison is also in the hop business, the yield averaging 600 pounds, at $150 profit per acre. Dairying is extensively followed in Cortland and Herkimer, and farmers are generally prosperous. In Wayne peppermint culture is very profitable; upon low-lying lands the yield thirty to forty pounds of oil to the acre.

The lake region generally enjoys great variety in agriculture, produces fruit, beef, wool, butter, cheese, and finds a profit in so doing. Dairying has much increased of late. In Jefferson the manufacture of Limburg cheese, introduced by German residents, has benefited the county greatly. Farms of 200 acres, besides furnishing bread for the family, will support twenty cows that will yield a product of cheese worth $1,000. Grape-growing is successful in Chautauqua, on Lake Erie, as well as in Niagara and Lake Ontario counties.

5. Red Mediterranean is most common. White Mediterranean frequently reported, with a large number of other varieties, as White Michigan, Tappahannock, Soule's, Amber, Black Sea, Scotch Fife, White Flint, Blue Stem, Gold Drop, China Tea, Diehl, Canada Club, Treadwell, &c. By far the greater part of the returns indicate the Mediterranean varieties as preferred, on account of hardiness and greater exemption from insect attacks. Such preference is expressed in Chautauqua, Niagara, Seneca, Oneida, Tioga, Madison, Suffolk, Fulton, Onondaga, Wayne, Schoharie, Westchester, Dutchess, Ulster, Queens, and many others. In Otsego and Ontario the Soule is most popular, as more productive than White Flint, and of better quality than Mediterranean. In Kings, the Amber wheat, deemed less liable than others to rust, is preferred. In Livingston, White Michigan is the most favored variety, on account of its hardiness. In Jefferson, three kinds of wheat are cultivated, chiefly: 1. Black Sea, yielding twenty to twenty-five bushels per acre twenty years ago, but giving scarcely half as much now, yet retained because it is hardy and bears late sowing well. 2. China, formerly of high repute, producing excellent flour, but greatly diminished in yield and beginning to be neglected. 3. Fife or Scotch, cultivated still, though reduced in yield. The Genesee valley, once famed throughout the country for its yield and quantity of wheat, has greatly declined in both of these particulars. The destructiveness of insects, and the failing reputation of the flour produced, attest the deterioration of the soil, and the unskilful culture which led to such a result.

In Genesee, wheat is mostly drilled, on summer fallows, ploughed in June or July, and worked fine with harrow and gang-plough. In Ontario, the same practice prevails; and clover sod and spring grain stubble are sometimes ploughed under for a wheat crop. Either summer fallowing, or fertilizing with stable manure, are practiced in Cortland. In Jefferson, after a crop of corn, peas, or potatoes, and sometimes grain, even wheat, the land is ploughed in the fall, and the seed sown on the surface in the spring, and dragged in, and sometimes rolled if the soil is dry. Before the midge made its appearance, good crops of winter wheat were produced. The reporter says: "About the year 1847 the devastation by this destructive insect became so great that we had to quit raising this kind of wheat. Its yield dwindled down to nothing. Then we substituted spring wheat. Within a year or two some of our enterprising farmers

ventured to sow winter wheat, with tolerable success. This encouraged others so much that the whole crop of last year's raising was used for seed last fall. The yield was from 15 to 20 bushels to the acre, and sold at from $2 50 to $3 per bushel. The kind raised was mostly the Red-bearded Flint." In Livingston, where wheat is a staple, a somewhat more thorough culture obtains. Ninety-five per cent. of the seed is drilled; the ploughing is from seven to ten inches deep; cultivating and harrowing carefully precede the drill, and the result is, wheat is the principal crop of the county. In Kings, the custom is to sow on the furrow with grass seed, and harrow twice. The best success is obtained in Madison after peas. A top dressing with lime, ashes and fine stable manure is applied when greensward is turned. One-third of the winter wheat is sown after spring grain, in Niagara. In Chautauqua, corn is followed by oats or barley. The stubble is ploughed in August, manured, and drilled with 1½ bushels of wheat to the acre.

Our correspondent in Onondaga says: "Wheat is here mostly sowed after barley or oats, though a clover sod is much preferred, with twice ploughing and sufficient harrowing, to very thoroughly pulverize the soil; and if about eight loads of well-rotted manure are added per acre, we can expect from 20 to 40 bushels. Necessity has forced us to a better mode of culture, and more thorough tillage, but, as a whole, there is room still for improvement, though I am informed, by one who has spent this season abroad, that only portions of France and England are any better cultivated than our lands in this section of New York."

The use of the drill may be taken as an index of the thoroughness of culture. Some counties report twice the amount of cultivating that is given in others, and the yield is correspondingly increased. Enough is shown to prove that the only reason for a product only half that of English wheat-growing, and for most of the loss from insects, and for poor quality of flour, is careless, insufficient culture.

The time of sowing winter wheat is variously given: commencing in Chautauqua, Steuben and Tioga, in August; in nearly half the counties reported, September 1st; in Albany, Westchester, Cortland, Wayne, Ulster, Dutchess, and others, 5th to 15th; Kings, October 1st—closing prior to September 20th and 25th, in most cases; in Livingston, Chautauqua, Dutchess, Fulton, and others, October 1st; in Queens, October 20th. The spring varieties are put in about the last of April or first of May—the period being extended in some cases to May 15th; in Jefferson, to May 20th.

6. In the northern part of the State, the season for pasturage is but five and a half to six months. A few counties on the lakes and on Long island report seven months; the majority, six months. The average varies little from six months for the entire State. Sheep will find good feed for a longer period than cattle.

The prices of pasturage vary greatly. Among the rough and isolated portions of the northern wilderness, the price averages about one dollar per month; in Livingston, Chenango, Cattaraugus, Genesee, Suffolk, Washington, and other counties, from six to eight dollars per season; in Tioga, Chautauqua, Albany, Ontario, Madison, Marion, Schenectady, Delaware, Monroe, and Otsego, eight to ten dollars; in Cortland, Wayne, Oneida, Schoharie, Dutchess, Fulton, Niagara, Jefferson, ten to fourteen dollars; in Herkimer, Onondaga, and Seneca, fifteen dollars; in Queens, near New York city, on Long island, twenty-eight dollars, or four dollars per month.

A great variety of grasses are named, common to most of the States in this latitude, prominent among which are redtop, white clover, and June grass.

7. Western New York is more generally engaged in fruit culture than any similar area in any other portion of the country. A correspondent in Monroe county, claiming for that section unequalled facilities for transportation of fruits,

by lake, canal, and railroad, thus writes: "Apples and grapes seem best adapted to our section, but pears, peaches, quinces, cherries, and plums are largely raised. In fact, nearly all the fruits of northern latitudes do well here. This county is also largely in the business of growing fruit trees. Some nurseries of nearly one thousand acres of young trees, and many more of over one hundred acres, are in this vicinity. As to facts in fruit culture: the writer had, upon a trifle less than one-fourth of an acre, fifty-three barrels of Baldwin apples, two years ago; sold for $5 per barrel—$265 for the lot. The same ground produced forty-seven barrels this season; sold for $3 50 per barrel—$164 50 being the product of less than one-fourth of an acre. This variety, the Baldwin, bears only alternate years here. The present year my vineyard, of two acres, produced 11,240 pounds of grapes, (not a large yield,) which sold at about 12 cents per pound."

The Jefferson correspondent gives the following facts illustrating the influence of large bodies of water in fruit-growing: "There is a marked difference in the capabilities for fruit of the southern and northern parts of our county. While the section south of the Black river is, in most of its towns, well adapted to fruit, particularly to apples, the towns lying north of the river produce them only in a few localities in quantities to make their culture profitable, and those localities are situated along the shores of Lake Ontario and its bays, and on the river St. Lawrence. At some distance back from the shore fruit trees are very short-lived. They will grow rapidly for a few years, bear a few good crops, then decline, or die off suddenly. Whether the cause of this is in the soil or in the climate, I am unable to say; it is found, probably, in both combined. Our soil consists of clay and loam, underlaid by limestone, generally deep enough for the plough, but occasionally cropping out in ledges. We have long and cold winters. Our summers are hot, and frequently dry, and these circumstances combined may be unfavorable to the life of fruit trees. By selecting the most favorable situation in regard to soil and shelter, and by deep drenching and draining the land, and with proper after-care and attention, some farmers have secured a good prospect of success."

From Ulster, $100,000 worth of strawberries were last season shipped to the New York markets, and at least $200,000 worth of whortleberries from the Shawangunk mountains. From $400 to $1,000 worth of small fruits are sold from an acre. Destruction of plum trees by black knot is reported in Kings. The same disease has also attacked cherry trees. Favorable accounts of pears are received from Queens, especially as to the Bartlett and Lawrence. It is stated of Westchester that apples, formerly abundant, are scarcely ever grown. The only sorts produced with any success are the Russet and Greening. That peaches and plums cannot be raised, but that pears are comparatively successful. Good apple orchards in Livingston produced an average of $100 per acre. Apples are abundant in Tioga, and a large amount of cider is made, selling at $6 per barrel. Apple orchards yield $100 per acre in Steuben, at $2 per barrel at home. In the towns of Pultney and Urban, grapes yield $600 per acre in some cases, averaging $350 per acre. Pears do well in Onondaga. Old apple trees are dying out and many new orchards are being planted, though they do not yield as formerly. The cutting away of forests is suggested as the reason of the change. The culture of grapes is being greatly extended in Seneca, especially on the lake shores, and is found very profitable.

The Genesee correspondent says: "Our soil and climate are capable of producing all the different fruits, but apples are principally raised for export. Their cultivation has proved profitable and orchards are extended. I here give the yield and profit of the orchard of my neighbor, Hon. John W. Brown, for the past three years, as a fair sample of the county: Extent 2½ acres; near 100 trees, planted about 45 years ago; about one-half ingrafted with winter fruit,

and a fair variety of summer and fall fruit. He sold in the three years as follows:

In 1865, $600 00, used at home	$100 00	$700 00
In 1866, 275 00, used at home	80 00	355 00
In 1867, 430 00, used at home	100 00	530 00
Total for three years		1,585 00

Also the product of one tree of Northern Spy apples:

In 1865, yield 11 barrels, at $4 00 per barrel	$44 00
In 1866, yield 3 barrels, at 3 50 per barrel	10 50
In 1867, yield 5 barrels, at 3 00 per barrel	15 00
Total of one tree for three years	69 50

"This orchard has not been ploughed for over thirty years, and has not been very properly trimmed. He has been at no expense save gathering and marketing the fruit."

"Ontario produces good apples, pears, peaches, plums, cherries and grapes. Apples are somewhat affected by insects, pears with the blight, plums with the black knot, and cherries by the curculio; while grapes have proved a success. This town, Naples, has about 500 acres in bearing, and from $300 to $800 per acre has been realized, while smaller vineyards have produced larger profits. The kinds principally cultivated are the Isabella, Catawba, Delaware, Concord, and Diana."

The following extract is from the Niagara report: "Our apples are noted for good flavor and long-keeping qualities, Chicago buyers often paying from $1 to $1 50 more per barrel here than for the same kinds in Michigan. As to facts, three men in Newfane sold 2,800 barrels of apples this year. One of them, from fourteen acres, sold 1,000 barrels. One in Wilson, from one acre, sold 151 barrels. Another, Mr. Somersett, from four acres had 600 barrels. One in Porter had, from four acres, 500 barrels; and from one tree he gathered 26 barrels. Last year, one man in Newfane received $1,300 net from peaches grown on three acres. One school district, district No. 1, Newfane, received over $40,000 for fruit. One man in Lockport last year was offered $1,500 for the pears grown on one acre. He sent them to New York, and they were over-kept, and he only realized $1,000 for them. The sales of apples this year, as taken from the books of the various buyers in this county, foot up 200,000 barrels, at an average price of $2 60 per barrel, making, probably, the most money ever received for any one crop of any kind ever gathered in this county."

NEW JERSEY.

1. This State shows a large general advance in the price of farm lands, and adjacent to the great cities the percentage of increase is very high, consequent upon the division of farms into truck patches and fruit gardens for the supply of the ever-increasing demands of the city markets. The extension of railway facilities into sections heretofore remote from markets has brought many thousands of acres under improved cultivation, and much enhanced the value of the lands thus brought into communication with the cities drawing supplies from either end of the State. In Essex county the average increase is reported as 50 per cent., though in particular localities it reaches 300 per cent.; Hudson, 30 per cent. in the northwestern portion, and 50 in the eastern and southern parts, many farms having been cut up into villa sites, selling at from $1,000 to $3,000 per acre; Passaic, 25 per cent. advance; Union, 50 per cent., and near the railroads,

100 per cent. ; Hunterdon reports little general increase over 1860 ; Warren, 40 per cent. ; Ocean, 50 per cent., cranberry lands running to much higher figures ; Monmouth, 25 per cent. ; Burlington, 20 to 25 per cent., much more in some localities ; Gloucester, 20 per cent. in the best lands, and 30 to 40 per cent. in new lands recently cleared and opened up by railroad improvements ; Camden and Cape May about ten per cent. general increase ; Salem, 15 to 20 per cent.; in Cumberland and Atlantic large tracts of land, comparatively valueless in 1860, have been brought under cultivation, and much enhanced in value.

2. The value of the wild or unimproved lands of the State varies greatly, from $1 to $300, according to location, quality and resources. In several of the counties there is very little land of this character. In Essex and Hudson counties there are many thousands of acres of salt meadow and swamp lands, which, when reclaimed, must become immensely valuable for gardening purposes, from their proximity to New York and the great depth of rich alluvial matter deposited upon them. A systematic drainage of these flats is now in progress with prospect of complete success, at an estimated expense of about $10 per acre. The market price of these lands is rapidly advancing in view of this effort at reclamation. In Ocean county the average value is $15 per acre, but poor tracts may be bought at from $1 to $5 per acre ; large tracts of swampy or bog lands are adapted to the growth of cranberries, which are extensively cultivated in this county. In Monmouth, unimproved lands run from $5 to $300, the latter for very superior timber. Burlington county gives an average of $6 to $10 per acre, pine lands and white cedar swamp, light sand, and black peaty soil ; the former growing blackberries and strawberries admirably, and the latter, cranberries, which are native to the soil. In Camden and Gloucester, $15 to $20, chiefly a sandy soil, with some tracts of stronger soil, suited to trucking and to some extent the growth of grass or grain ; in Cumberland, Cape May and Atlantic, the price varies from $1 to $10, generally light, sandy soil, susceptible of improvement for growth of truck, small fruits, &c., and large settlements have sprung up within a few years and the value of the adjacent lands correspondingly increased.

3. In the northern counties valuable deposits of iron ore are found, and are in a fair state of development, with some copper and considerable building and other stone; while in the central and southern counties immense deposits of greensand marl exist. Hickory, white oak, black oak, and chestnut timber of superior quality is found in Hunterdon and Warren counties, and valuable cedar timber still remains in the swamps of Ocean, Burlington, Gloucester, Atlantic, and Cape May. The marl beds extend across the State from Monmouth county through Ocean, Burlington, Camden, Gloucester and Salem, to the Delaware, and is being largely developed as a fertilizer, free use of which has made fertile large sections previously of little value. The raising of this marl has become an extensive business in Monmouth, Burlington and other counties, with constantly increasing demand, as the advantage of its application to the light soils of the State is no longer a question. The supply is comparatively inexhaustible. Muck also abounds in a number of counties, and is used as a fertilizer with marked benefit. The manufacture of glass has been extensively engaged in upon the pine barrens and sandy lands of South Jersey.

4. A mixed husbandry prevails in most of the counties, embracing all of the grass, cereal and root crops suited to the latitude. Market gardening and the growth of small fruits are commanding much attention in districts contiguous to or in easy communication with New York and Philadelphia, and are engaged in with assurance of ready sales and large profits. In Hudson, Essex, and Union, in East Jersey, and in portions of Burlington, Camdem, Gloucester, and other southern counties, this culture is made a specialty. In the western part of Burlington county alone, there were the past season about 1,400 acres of strawberries in bearing, 700 acres of blackberries, and 150 acres of raspberries ; while

from the swamps of Burlington and Ocean are sent to market large quantities of cranberries, upwards of 100,000 bushels in 1867. The light lands of the lower counties of the State are well adapted to the growth of berry crops. Sweet potatoes are also largely grown in the sandy soils of Burlington, Gloucester, and other counties, and return large profits to the producer. The average production of corn in 1866 was 43⅕ bushels per acre; wheat, 13½ bushels; rye, 14 bushels; oats, 34½ bushels; barley, 20 bushels; buckwheat, 18 bushels; potatoes, 77 bushels; hay, 1¼ tons.

5. Mediterranean wheat, chiefly red, is almost entirely grown, being considered less apt to be affected by the rust and insects, though samples of the early Boughton wheat have been tried with success. In the western and northern counties wheat is generally sown from the first to the third week of September, and harvested during the first and second weeks in July, while in south and west Jersey the ground is seeded a week or two later and the crop harvested a few days earlier. The mode of culture is generally the simple ploughing and harrowing, with special manuring, frequently after early potatoes, corn, oats, or vegetables. In Burlington, Warren, Union, Ocean, and Cape May, from two-thirds to three-fourths of the seed is drilled. Spring wheat is not cultivated. The average length of the pasturage season is about six months, at a cost per head varying from one to four dollars per month. In Hudson and Hunterdon it is estimated at $4 per month; in Passaic, Essex, and Burlington, $3; Union and Gloucester, $2 50; Monmouth and Warren, $2; and Cape May as low as $1 per month. White clover grows quite generally, also common or herd grass, and red clover and timothy grow well on prepared ground, the latter furnishing the chief crop of market hay.

7. Apples have ceased to be a reliable crop in New Jersey, and only in alternate seasons are orchards looked to for even a fair yield, so injurious to the fruit and trees have the insects become. Pears are more successfully cultivated. Peaches are also uncertain as a crop, but so profitable when yielding that much attention is being given to their production in the central and southern counties. Grapes are subject to mildew and rot, and are not generally successful as a crop. The blackberry, strawberry, and raspberry, grow in great perfection, and are extensively cultivated for the city markets, yielding almost fabulous profits to the cultivator. The demand for these small fruits always exceeds the supply, and the perfect adaptation of the light soil of the lower part of the State to their growth offers assurance of good returns for the industry devoted to such culture. The cranberry production is also large, and, as heretofore stated, is proving largely remunerative, and rendering valuable lands formerly apparently worthless. This crop is said to average a profit of $300 per acre, the price being from $3 to $4 per bushel, and some large growers produce from 4,000 to 5,000 bushels. The total yield of the crop for 1867 was upwards of 100,000 bushels, and will be largely increased the coming year. The unimproved swamp lands adapted to the growth of cranberries sell at from $10 to $50 per acre; cost of preparation about $240 per acre, and when in full bearing sell as high as $1,000 per acre.

Quite a large influx of population is noted in the counties offering inducements of cheap lands and railroad facilities for marketing crops, and in a few years many thousand of acres of what has been considered waste lands will be brought into profitable cultivation.

PENNSYLVANIA.

1. Estimates from but two or three counties of Pennsylvania place the average value of improved farm lands at the same figures as given in 1860, while the general average for the whole State would appear to be about 20 per cent., from 20 to 25 in the eastern half, and from 15 to 20 per cent. in the western

portion. Forest and Elk counties report no increase since the date named, while Lycoming reports as high as 100 per cent. advance; Susquehanna, Luzerne, Lancaster, Cumberland, Clearfield, Erie and Lawrence, from 40 to 50 per cent.; Wayne, Wyoming, Bradford, Tioga, Columbia, Union, Berks, Perry, York, Delaware, Franklin, Cambria, Westmoreland, Somerset, Beaver, Armstrong and Warren, from 25 to 35 per cent.; Crawford, Alleghany, Dauphin, Juniata and Bucks, from 15 to 20 per cent.; McKean, Washington and others, from 2 to 15 per cent.

2. The value of unimproved or wild lands is returned at prices ranging from $2 to $45, varying according to location and timber and mineral resources, averaging from $10 to $12 in the State. In Berks county nearly one-fourth of the surface is hilly and timbered, and is valued at $45 per acre for the timber. York county gives an average of $30; Bradford, Perry, Crawford, Erie, Lawrence, $20; Susquehanna, Wayne, Tioga, Dauphin, Clearfield, Armstrong, Greene, Elk and Warren, $10 to $15; Franklin as low as $2; Lancaster, Delaware and Montgomery, report no wild lands, but tracts of woodland, worth the value of the wood above the value of the land, $100 to $200 per acre. Much of the wild land is mountainous, and valuable only for the mineral deposits or growing timber, while portions are susceptible of the highest cultivation and improvement, or adapted to grazing and dairy purposes.

3. The mineral wealth of Pennsylvania is well known. Our returns are full of references to the rich iron ores, in many places extensively worked, of the entire length of the Susquehanna valley, of the Schuylkill and Lehigh regions, and of the western slope of the Alleghanies. The anthracite coal, of the eastern and northeastern sections of the State, is of great value; and the bituminous varieties, of the northwestern and western sections, are not excelled in yield and quality by any coal of that character in any coal lands of the United States. In Elizabeth township, Alleghany county, our correspondent estimates $365,000,000 worth of coal at four cents per bushel, and that at one cent per bushel the coal finding an outlet from the Monongahela river would suffice to pay the national debt. The following description of mining here is thus given:

"The principal vein is called the 'six foot vein,' and dips towards the south, so that at Pittsburg it is about 400 feet above low water, and at Brownsville is at the water's edge—the distance being 60 miles. The coal is taken from the miner's rooms by wagons, containing usually 25 bushels, and hauled by mules to the mouth of the pit and let down the hill by cable on a railway constructed for the purpose; the loaded wagon drawing an empty one up to the pit. A mine in good order and well worked will produce about 8,000 bushels per day. Four cents per bushel is paid for digging. Many things conspire to prevent constant and regular work, such as very low water, very high water, ice in the river, and occasionally dullness of sale at Cincinnati and other markets below. At the present time, owing to the low water, we have millions of bushels in boats awaiting the 'moving of the waters.' It is estimated that there are $3,500,000 worth. I consider that our coal trade is as yet in its infancy, and this results from the want of capital as much as from any other cause. Good coal lands vary in price from $50 to $500 per acre, owing to their situation in regard to the slack-water."

Large quantities of chrome have been mined in Delaware county. A Philadelphia company is sinking a shaft in the southeastern part of Greene county, for gold-bearing quartz. Limited quantities of lead and copper are found in Bucks. Building-stone is quarried with profit. The State is still rich in timber, in great variety, from which large revenues are derived. Williamsport, on the west branch of the Susquehanna, has a large population almost exclusively engaged in the lumber business. Lime is abundant, and is relied upon, particularly in the eastern section of the State, as a fertilizer. The soil is various in quality, and generally quite productive. The famous farms of Lancaster are not only sustained, but improved, by means of cattle-feeding and liming the soils.

4. A mixed husbandry prevails in Pennsylvania—wheat, corn, oats, hay and potatoes the leading crops. In Susquehanna, Bradford and other counties, grass is the chief crop grown, and the profits shown in the cattle, sheep, butter, and wool sent to market. Bradford promises soon to rival Orange county, New York, in the butter business. In the counties adjacent to Philadelphia market gardening, small fruits, &c., are specialties, increasing the value of the lands, and bringing in large returns to those engaged in the business. The wool crop is given prominence in Washington county, at the extreme western part of the State. Mixed husbandry appears to be most profitable through the interior and west, finding an excellent home market for the productions throughout the extensive mining and lumbering regions. As in other States the culture of sorghum has been almost entirely discontinued, though it has generally proved profitable.

5. Mediterranean wheat has been generally preferred, as being less affected by the frost, and the fly and other insects, though within a few years the Tappahannock wheat has been cultivated with success in some sections, ripening from one to two weeks earlier than other varieties, while in other localities it is pronounced a failure. Between the red and white Mediterranean wheat the former meets with most favor, as it withstands the ravages of the fly more certainly and uniformly yields better than most other varieties. In Lancaster they have an improvement upon the Mediterranean, called Lancaster wheat, which is in general use in this and adjoining counties, and valued for its early ripening qualities. Soule's and Blue Stem are preferred in Tioga; in Cambria the Blue Stem; in Warren the White Flint. Some spring wheat is grown in the northwestern counties, but it is an uncertain crop and not profitable, and its cultivation is being abandoned. Time of sowing winter wheat varies in different localities from the last week in August to the first and second week in October, but the crop is principally in by the last of September. Harvesting extends through July, but the major portion of the grain crop is cut during the second and third week. In Greene county the rotation is corn on a sod, to be followed by oats, and then wheat, the land being ploughed once for each crop. Our Westmoreland reporter says: "Much of our grain culture is conducted in a very slovenly manner; the ground is ploughed three or four inches deep, sown broadcast, then harrowed and cross-harrowed—and that is the whole of it. There is not a scarifier, a sub-soil plough or a roller on one farm in a dozen in this county, nor one farm in a hundred that is either wholly or partially under-drained. We have a great deal to learn, but seem to be a perverse set of scholars. So long as our prolific soil yields a moderate return for our labor, we seem satisfied to jog along as our fathers did before us." In Tioga they generally sow wheat after barley, though some sow on sod ground. "Breaking sward ground in fall and sowing oats in spring, once ploughing after oat harvest, top-dressing with barn-yard manure, and then sown to wheat," is coming into practice in Bradford and Columbia, and succeeds well. In Luzerne the ground is twice ploughed; summer fallowing, as formerly practiced, has been abandoned. Our Lycoming reporter says: "Our best farmers plough twice, harrow well, and, if the ground will admit, drill; but we have all kinds of bad farming, and this lowers the average yield to an annoying extent." In Lancaster county "wheat usually follows oats—the oat stubble is heavily manured, the manure ploughed under and well harrowed, then ploughed or thoroughly shovel-ploughed, rolled or dragged previous to sowing the wheat. The grain is now almost universally drilled in, and since drilling has become general *freezing out* has been rare." Throughout the State perhaps one-half the wheat is drilled; in some counties nearly the whole average is drilled, and the advantage of the system is generally recognized and is being rapidly adopted.

6. White clover, red clover, timothy, herd-grass, spear grass, and a species of blue grass—shorter than the Kentucky, but of a quality more relished by

animals—are the principal grasses, while many other grasses, native and introduced, have become common in many counties, and compose the sward, which is formed by a natural process upon soils that are left at rest for a few seasons. The length of season in which stock can feed in pastures exclusively is generally reported at from six to seven months, though two or three return as low as five and five and a half months; a large proportion, however, fix the season at six months, while the estimated cost per month ranges from $1 to $3 50, averaging about $1 50 per month. Wayne, Crawford, Somerset, and Washington estimate the cost at something less than $1, while Lycoming, Montgomery, and Bucks place it at $2 50, Delaware at $3, and Lancaster at $3 50.

7. Pennsylvania grows most of the fruits adapted to northern latitudes—apples being the staple, the cultivation of which has been increasing for several years in the western counties, and the quality of the fruit improved by careful culture. The crop of 1867 was quite poor throughout the State, but the yield of the preceding year was largely remunerative in the counties where attention is given to the fruit. Our correspondent in Alleghany county says: "In 1866 Mr. Van Kish realized about $1,200 from an orchard of about eight acres, and others did proportionately well." From Westmoreland a correspondent writes: "With so diversified a soil as ours, composed in a large degree of the debris of animal, vegetable, and mineral matter, and embracing hill and dale that lie exposed to the morning and evening sun, with many springs of the purest water, our county is capable of producing, in great perfection and profusion, all the fruits known and cultivated in the northern temperate zone. On my own farm we seldom have an entire failure of the apple, pear, or peach crop. Grapes, embracing about sixty varieties, have never entirely failed, nor have they been seriously injured by rot or mildew. This year our apples have commanded $1 25 per bushel, when the surplus crop was sold in October. Our orchards are kept in grass, which is ploughed down only once in ten or twelve years. A crop of hay, made from a mixture of orchard grass, clover, and spear grass, is taken off in June. It is pastured after the fruit is gathered. We consider the hay and pasturage equivalent to all expenses attending the fruit culture, and with a full crop of fruit we net from $1,000 to $1,200 from a twelve-acre lot." Peaches are an uncertain crop in most localities, when spared by the frosts, being subject to much injury from insects. Our York correspondent writes: "Of fruits we raise, or try to raise, apples, peaches, pears, plums, cherries, &c.; the large fruits have, of late years, failed. Of the small fruits there is a fair yield annually." In Dauphin "apples do reasonably well one year in three; peaches somewhat better; pears do still better; grapes, in proper situations, do well in favorable seasons; the Catawba ripens finely, and is regarded as the standard of tenderness for this latitude. All varieties ranking in hardiness with the Catawba, and above, will endure the winter without protection." In Berks "the insects have caused great deterioration in fruit products. Formerly apples yielded enormous crops, but since the appearance of the borer and curculio the crop has been a failure. Pears are the most reliable; grapes entirely free from rot, climate favorable; small fruits successfully cultivated." In fact, throughout the State, insects are reported as the great enemy of fruit crops. From Erie our correspondent writes: "Apples, pears, and quinces, with most of the small fruits, do well in parts of this county, while the portion bordering on the lake is unsurpassed in capability to produce these fruits, and it is generally conceded that the south shore of Lake Erie is one of the best grape-growing sections this side of California." Beaver county reports the establishment of many new vineyards, particularly along the Ohio river, and that some of the young vineyards, two or three years old, yield $500 to $600 per acre.

DELAWARE.

1. Delaware shows a marked increase in value of farm lands since 1860. Newcastle county has not been subject to any great fluctuation since that date, but the high prices of agricultural products, and the steady increase of the population of its chief city, Wilmington, now containing 25,000 inhabitants, have justified a regular advance in the price of lands within convenient distance of city markets, which is estimated at one hundred per cent. in the time named. An equal percentage of increase is also reported for Kent and Sussex. In the latter the railroad running across the western part of the county, and the Junction and Breakwater railroad, one-half of which is now completed, have added much to the price of lands adjacent, some farms having been sold at four times their market value six years ago.

2. In Newcastle county there are little or no wild or unimproved lands. In Kent the average price of such lands is given at twenty dollars per acre, the low swamp lands at ten dollars, while in Sussex the average is placed at ten dollars for wild lands. A large proportion of these lands are capable of high cultivation, and are now being rapidly improved, and when fenced and cleared of bushes and briers, by ploughing and applying fertilizers, it may be increased in value several hundred per cent. The swamps are comparatively worthless, except for firewood, unless thoroughly drained, when they may be made equal in value to the upland.

3. The soil of the State is varied, a portion being well suited to the culture of vegetables and fruits. Oak and pine timber is abundant in Sussex. Kent was at one time noted for its fine white oak and poplar timber, but the most valuable is now cut off. There is some iron ore in Sussex, and limestone is found in Kent suitable for building and fertilizing purposes. There are great inducements for the development of the agricultural resources of the State, as most of the lands are susceptible of high improvement.

4. Wheat and Indian corn are the principal crops grown. Our Kent correspondent states that much of the land in that county will produce thirty bushels of wheat and fifty bushels of corn to the acre. In New Castle a mixed husbandry prevails. "The lands are generally divided into small farms, say about one hundred acres on an average, and the fields in proportion, to answer the usual rotation of crops, which is, chiefly, corn from ploughed sod, oats, wheat, and then the artificial grasses."

5. In New Castle the old bearded Mediterranean wheat is cultivated, preferred chiefly from its supposed greater immunity from attack of the Hessian fly and less liability to rust, being ten days earlier in ripening than other varieties. The Mediterranean and German wheats are almost exclusively grown in Kent county, while in Sussex the Kentucky white, blue-stem white, red Mediterranean, and Boughton, are grown—the red Mediterranean gaining favor on account of its early ripening and freedom from rust, though the yield is not large. The seeding season runs all the way from the 1st of September to the middle of October, while the general harvest comes the first week in July; but the red Mediterranean ripens somewhat earlier. The usual mode of cultivation in Kent is to "turn fallow in August, harrow well, and drill the wheat with fertilizer, though many seed the corn ground with wheat." In Sussex the mode of culture varies, and the correspondent estimates that one-half is ploughed in, one-third drilled in, and the residue is sown and put in with a spike-harrow. In New Castle three-fourths of the crop is drilled in.

6. The natural grasses are white clover, blue grass, green grass, June grass, and crab grass; and the cultivated grasses are timothy, herd grass, and red clover, upon which cattle can feed exclusively about six months of the year, at an estimated expense of about $1 50 per month in Kent, $1 65 in Sussex, and about $3 in New Castle.

7. Of the capabilities for fruit our New Castle correspondent writes: "With proper attention the apple does as well in this county as in any of the middle States. The peach flourishes finely, and makes our State noted for its production. It is stated that 300,000 baskets of the fruit were shipped from Middletown alone during the last season, all produced in the lower sections of the county. The pear, grape, strawberries, raspberries, &c., are cultivated with ease and success." Kent county, says the correspondent, "is famous for its fine peaches, immense quantities of which are shipped to New York and Philadelphia in season. Some orchardists have as many as 15,000 trees in bearing, and one claims to have 60,000 trees. The average yield of a healthy, well-grown orchard is about two and a half baskets of five-eighths of a bushel to a tree, and fifty cents per basket in the orchard is considered a paying price." From Sussex we have: "The capabilities for fruit growing in this county are perhaps not excelled by any on the peninsula, but the culture has been neglected for want of railroad transportation. The soil and climate are highly favorable to peaches, apples, pears, and the small fruits, which pay a large profit. The peach is largely cultivated, and the crop of the past year, though the season was unfavorable, reached 700,000 baskets; and the number of trees planted the past fall and coming spring will probably swell the number to 1,000,000 baskets. The average yield is one box to each tree."

Table showing the average yield per acre and the average prices of the principal crops of the United States for 1867, *and comparative amount of winter and spring wheat, in tenths.*

STATES.	WHEAT.				RYE.		BARLEY.		OATS.	
	Average yield per acre in 1867, stated in bushels.	Average price per bushel on the 1st day of January, 1868.	How many tenths of the usual crop are winter wheat?	How many tenths of the usual crop are spring wheat?	Average yield per acre in 1867, stated in bushels.	Average price per bushel on 1st day of January, 1868.	Average yield per acre in 1867, stated in bushels.	Average price per bushel on 1st day of January, 1868.	Average yield per acre in 1867, stated in bushels.	Average price per bushel on 1st day of January, 1868.
Maine	10.6	$2 79	1	9	14.8	$1 61	18.3	$1 13	22	$0 80
New Hampshire	12.1	2 89	2	8	14.7	1 62	24.5	1 24	27.5	80
Vermont	15.8	2 76	1.5	8.5	15	1 62	23.4	1 46	30.1	77
Massachusetts	16	2 81	3	7	15.6	1 58	22.6	1 54	26.7	90
Rhode Island	.....	.....	.....	.....	15	1 65	25	1 42	27	84
Connecticut	17.5	2 63	6.7	3.3	14	1 63	23.2	1 45	27.5	85
New York	14.5	2 64	6.5	3.5	15	1 50	20	1 47	26.2	76
New Jersey	14	2 58	9.9	.1	13.7	1 63	21.5	1 27	27	73
Pennsylvania	12.5	2 43	8	2	13.7	1 41	20	1 37	30	66
Delaware	9.3	2 38	9.6	.4	7	1 50	.....	.....	16.6	73
Maryland	11	2 43	10	.....	13.4	1 45	26	1 27	23.2	68
Virginia	8	2 12	10	.....	8.5	1 14	12.3	1 05	17	48
North Carolina	6.9	2 11	9.8	.2	7.7	1 41	.....	.....	13.3	64
South Carolina	6.4	2 38	9	1	5.7	1 79	6	2 00	11.1	75
Georgia	8	2 35	9.7	.3	8.1	1 77	14.3	2 03	12.4	90
Florida	.....	.....	.....	.....	.....	.....	.....	.....	17	1 25
Alabama	7.8	2 05	9.6	.4	7.9	1 63	14.4	1 96	11.7	87
Mississippi	9.5	2 40	10	.....	11.5	1 92	8	1 50	13	1 07
Louisiana	8	2 50	10	.....	.....	.....	.....	.....	14	1 62
Texas	9.5	1 89	8	2	16.3	1 28	24.8	1 10	23.5	79
Arkansas	9.2	2 01	9.5	.5	13.2	1 31	15	2 00	16.7	83
Tennessee	8.5	2 11	9.7	.3	10.5	1 20	19.5	1 34	15.4	62
West Virginia	10.5	2 39	9	1	12.4	1 20	20.8	1 40	21.5	51
Kentucky	8.2	2 17	9.9	.1	10.7	1 38	17	1 33	18.8	57
Missouri	12.4	2 00	8	2	16.2	1 15	21.1	1 46	30	49
Illinois	11.4	1 97	4.5	5.5	15	1 19	22.3	1 28	30.1	49
Indiana	10.5	2 21	9.5	.5	14.1	1 18	21.1	1 22	10.9	49
Ohio	11.6	2 36	9	1	13.4	1 26	24	1 29	31.1	54
Michigan	12.4	2 34	8	2	17.2	1 30	20.9	1 36	29.5	68
Wisconsin	12.3	1 77	2.5	7.5	16.5	1 14	25.8	1 35	35	59
Minnesota	12.5	1 48	1	9	18.8	1 11	23.6	1 07	38	72
Iowa	12.7	1 43	.8	9.2	19.4	1 04	29	1 16	42	42
Kansas	14	1 84	6.7	3.3	20.3	1 15	26.7	1 10	36	49
Nebraska	15	1 32	1	9	25.2	1 02	27	96	39.2	59

Table showing the average yield and prices of the principal crops of the United States for 1867, *&c.*—Continued.

STATES.	CORN.		BUCKWHEAT.		POTATOES.		LEAF TOBACCO.		HAY.	
	Average yield per acre in 1867, stated in bushels.	Average price per bushel on 1st day of January, 1868.	Average yield per acre in 1867, stated in bushels.	Average price per bushel on 1st day of January, 1868.	Average yield per acre in 1867, stated in bushels.	Average price per bushel on 1st day of January, 1868.	Average yield per acre in 1867, stated in pounds.	Average price per pound on 1st day of January, 1868.	Average yield per acre in 1867, stated in tons.	Average price per ton on 1st day of January, 1868.
								Cents.		
Maine	33.4	$1 59	21.9	$0 99	86.6	$0 93	.....	.....	1	$14 62
New Hampshire	35.5	1 56	22.3	1 00	97.5	81	.....	.....	1	15 00
Vermont	36.2	1 52	25.4	97	116.9	69	.....	.....	1	15 36
Massachusetts	35.7	1 53	18	1 14	96	1 11	1,100	22	1.3	22 12
Rhode Island	25.7	1 64	.....	.....	72.5	1 16	.....	.....	1.1	26 62
Connecticut	33	1 50	13	1 17	68	1 10	1,266	23	1.3	21 60
New York	30.4	1 32	20	1 04	84	90	533	14	1.2	17 47
New Jersey	33.1	1 23	19.3	1 33	56.6	1 41	.....	.....	1.3	22 13
Pennsylvania	32	1 17	16.3	1 13	74.4	1 04	725	9	1.3	14 83
Delaware	16.3	1 02	16.6	1 22	41.6	1 00	.....	.....	1.6	17 66
Maryland	28.4	1 09	18.8	1 20	71	1 10	453	12	1.3	17 54
Virginia	20.9	85	12.3	97	67	66	690	12.5	1.2	12 48
North Carolina	11.6	1 04	17.5	89	93	62	652	17.3	1.5	12 06
South Carolina	9.6	1 15	.....	.....	89.4	76	.....	.....	1	19 50
Georgia	13.1	96	.....	.....	101	62	515	30	1.3	21 58
Florida	11.8	1 38	.....	.....	143	1 10	.....	.....	.....	.....
Alabama	16.2	79	.....	.....	72.4	59	600	34	1	20 00
Mississippi	15.7	1 09	.....	.....	85	78	.....	.....	1.3	16 43
Louisiana	15.6	1 10	.....	.....	101	1 21	.....	.....	1.5	19 75
Texas	28.2	75	.....	.....	130.3	69	500	25	1.7	16 60
Arkansas	26.5	77	.....	.....	94	1 02	714	23	1.8	20 75
Tennessee	23.7	55	15	1 58	72.4	89	620	14	1.3	18 95
West Virginia	29.7	89	14.8	1 07	69.6	81	690	17	1.4	11 44
Kentucky	24.7	65	12.8	1 28	50.7	98	552	9.7	1.3	14 80
Missouri	27.2	66	21	1 21	73.9	97	802	11.5	1.7	11 11
Illinois	23.8	68	15.2	1 10	60.5	1 20	573	8	1.5	9 73
Indiana	29.2	65	16.7	1 10	73.2	97	809	9.4	1.4	11 63
Ohio	28.7	82	13.5	1 15	75.4	1 00	667	10	1.4	12 32
Michigan	31.4	96	17.2	1 04	97.5	73	.....	.....	1.3	16 14
Wisconsin	33.6	86	15.6	1 00	96	69	.....	.....	1.6	11 11
Minnesota	30	1 07	14.4	1 25	110	92	.....	.....	1.8	7 28
Iowa	33.8	55	20.6	1 10	108.7	79	656	23	1.9	5 77
Kansas	38.6	55	19.7	1 26	109	1 02	.....	.....	1.9	5 08
Nebraska	36	74	15	3 00	95	1 33	.....	.....	1.9	5 54

Table showing the average yield and prices of the principal crops of the United States for 1867, *&c.*—Continued.

STATES.	SORGHUM MOLASSES.		WINTER WHEAT.		WINTER RYE.		WINTER BARLEY.	
	Average yield per acre in 1867, stated in gallons.	Average price per gallon on 1st day of January, 1868.	Average amount sown last fall compared with 1866.	Average condition of same on 1st day of January, 1868.	Average amount sown last fall compared with 1866.	Average condition of same on 1st day of January, 1868.	Average amount sown last fall compared with 1866.	Average condition of same on 1st day of January, 1868.
Maine	.....	.....	9.8	9.3	9.9	9.7	.....	.....
New Hampshire	.....	.....	9.6	9.6	10.2	9.7	10	10
Vermont	.....	.....	10.5	10.5	11.5	10	.....	.....
Massachusetts	.....	$1 00	10.6	10.2	10.2	10	10.5	10
Rhode Island	.....	.....	.....	.....	19.2	10	.....	.....
Connecticut	95	92	10.3	10.6	10.4	9.8	9	10
New York	90	87	11.2	9	9.6	9.7	9.6	8.7
New Jersey	98.3	77	10	10	9.9	10	.....	.....
Pennsylvania	94.3	78	10.5	9.9	10	10	10	9.3
Delaware	77.5	65	8.6	10	10	10	10	10
Maryland	105	89	10	10	9.4	10.2	.....	.....
Virginia	67.5	61	12.3	10.1	9.7	9.5	10	9.3
North Carolina	64	60	11.2	10.7	10.5	10.1	14	9
South Carolina	35	85	11.6	10.9	10.2	10.6	10	10
Georgia	66	66	11.6	10.4	10.6	10.5	9.8	10.3
Florida	.....	.....	.....	.....	6	10	.....	.....
Alabama	46	81	12.2	11.4	9.9	10	9.6	10.5
Mississippi	50	97	15	10.3	10.4	11	.....	.....
Louisiana	.....	.....	10	10	5	10	.....	.....
Texas	78.3	92	8.5	9	9.8	9	8.7	9
Arkansas	68.6	85	14.9	10.4	11.1	10.4	12	10
Tennessee	82	69	15	11	10	10	11	10
West Virginia	86	73	14.6	10.2	11.5	9.8	9 8	10
Kentucky	68.8	64	10.5	9	9.6	8.9	9.6	8.3
Missouri	86	69	14.3	9.5	10.3	9.4	8.4	9.3
Illinois	87	68	10	9.5	9.2	9.7	9.2	9.9
Indiana	88.1	67	12.1	10.3	9.9	9.8	9.6	9.7
Ohio	84.8	69	12.5	9.8	10.1	9.8	9.8	9.5
Michigan	99.4	87	13.5	9.8	9.9	10	10.6	10
Wisconsin	67.4	74	9.6	9.5	10	9.3	9.4	9.6
Minnesota	86	96	8.6	12	9.7	9	8	10
Iowa	113.4	77	9	9.1	9.8	9.2	10	10
Kansas	111	74	11.4	9.9	9.7	10	9.8	9
Nebraska	133	86	6.5	.....	9.3	8	.....	.....

PRODUCTIONS OF CALIFORNIA.

The estimates heretofore given of the agricultural products of California are actually exceeded by the exhibit of the surveyor general, from returns of the assessors. It is the first official report made, and a summary will be found interesting, as made by our correspondent, Horace D. Dunn, as follows:

For the first time in the history of California, the surveyor general has been able to make a report of its resources, which may be considered approximately correct. This result is very gratifying to our people, and reflects great credit on Surveyor General Houghton, who, in 1866, induced the legislature to enact a law making it the duty of assessors to inquire into and report statistics of the resources of their respective counties, under penalty of loss of one-fourth their salary. The only drawback is that the reports are required in November of the preceding year, making the information fully twelve months old when it is given to the public. As matter of interest to the department and the people of the Atlantic States, I herewith append an extract taken from the report, and a partial synopsis of the statistics connected therewith:

For many years the mining interest of the State largely preponderated over the agricultural, but a change is rapidly and steadily taking place. This is abundantly shown by comparing a few years of the assessors' valuations of the counties styled mining counties with those devoted almost entirely to agriculture.

Production of leading staples.—The value of the total production of a few of the leading staples of our State for the year 1866, so far as reported, may be summed up as follows:

14,080,752 bushels wheat, at $1 per bushel	$14,080,752
11,605,922 bushels barley, valued at 45 cents per bushel	4,722,615
1,864,379 bushels oats, valued at 50 cents per bushel	932,189
358,584 tons hay, valued at $8 per ton	2,868,672
4,449,835 pounds butter, valued at 30 cents per pound	1,334,950
2,110,058 pounds cheese, valued at 15 cents per pound	316,508
5,229,826 pounds wool, valued at 16 cents per pound	836,772
1,791,633 gallons wine, valued at 40 cents per gallon	716,653
1,983,068 bushels potatoes, (sweet and common,) valued at 60 cents per bushel	1,195,841
181,850 bushels peanuts, valued at $3 per bushel	545,550
242,213 bushels beans, valued at $1 50 per bushel	363,319
Total value	27,913,818

In the above estimate of value I do not think that the quantity reported by the assessors of a single product is large enough, except it may be the one article of barley. Wine, wool, hay and potatoes, I believe to be much too small; yet the total is several millions of dollars in excess of the gold product for the year 1866, which, from the most reliable information to be obtained, may be put down at $24,000,000; and it is highly gratifying to know that, as fast as the gold product of our State falls off, the agricultural products much more than make up the deficiency.

From the statistical tables of the report I glean the following items:

1866—land enclosed, 4,207,131 acres; cultivated, 1,774,327 acres.

In wheat, 690,745 acres, yielding 14,080,752 bushels, an average of 20 bushels per acre. Largest wheat-growing counties: Santa Clara, 109,000 acres, 3,506,000 bushels; Solano, 141,150 acres, 2,117,250 bushels; Yolo, 47,705 acres, 1,446,579 bushels.

In barley, 472,621 acres, 11,605,922 bushels, an average of nearly 25 bushels per acre. Largest counties: Santa Clara, 81,000 acres, 2,194,000 bushels; Monterey, 22,375 acres, 1,221,500 bushels: San Joaquin, 48,294 acres, 922,000 bushels.

In oats, 48,583 acres, 1,864,379 bushels. Largest county, Mendocino, 10,000 acres, 200,000 bushels.

In potatoes, 18,886 acres, 1,834,603 bushels. Largest county, Sonoma, 3,300 acres, 241,192 bushels.

In hay, 295,716 acres, 358,584 tons. Largest county, Santa Clara, 16,000 acres, 30,000 tons.

In hops, 313⅝ acres, 200,912 pounds. Largest county, Sacramento, 36 acres, 38,300 pounds.

In tobacco, 143 acres, 63,017 pounds.

In cotton, 2 acres, 150 pounds, (San Bernardino.)

In silk cocoons, 296 pounds. Largest county, Santa Clara, 150 pounds.

Butter, 4,449,835 pounds. Largest counties, Marin, 1,337,500 pounds; Sacramento, 379,350 pounds.

Cheese, 2,110,058 pounds. Largest counties: Santa Clara, 543,000 pounds; Marin, 378,600 pounds.

Wool, 5,184,826 pounds. Largest counties: Santa Barbara, 587,500 pounds; Los Angeles, 405,000 pounds.

Apple trees, 1,694,986.

Pear trees, 482,477.

Peach trees, 1,088,038.

Plum trees, 234,280.

Almond trees, 28,640.

Walnut trees, (English,) 17,271.

Olive trees, 12 881.

Lemon trees, 3,029. Largest county, Los Angeles, 1,842 trees.

Orange trees, 11,284. Largest county, Los Angeles, 8,799 trees.

Grape vines planted, 19,710,814. Largest counties: Los Angeles, 3,000,000 vines; Sonoma, 2,830,195 vines; Santa Clara, 2,000 000 vines.

Wine, 1,791,633 gallons. Largest counties: Los Angeles, 600,000 gallons; El Dorado, 235,680 gallons; Sonoma, 199,030 gallons.

Brandy, 127,140 gallons. Largest counties: Los Angeles, 70,000 gallons; Sonoma, 6,838 gallons; Sacramento, 5,714 gallons.

General statistics.—Horses, 109,907. Largest counties; Los Angeles, 10,901; Sacramento, 8,873; San Joaquin, 8,836.

Mules, 21,310. Largest counties: Shasta, 1,942; Yolo, 1,976; Sacramento, 1,828.

Cattle, 436,363, as follows: Cows, 150,198; calves, 78,305; beef cattle, 188,352; oxen, 14,150.

Sheep, 1,346,749. Largest counties: Los Angeles, 135,000; Santa Barbara, 104,358; Colusa, 101,228.

Cashmere and Angora goats, 2,753.

Hogs, 332,049.

Hives bees, 27,204.

Grist mills, steam power, 74, with 187 run stone; water power, 65 mills, with 112 run stone. Flour made, 1,655,327 barrels.

Saw mills, steam, 180; water, 160; sawing 188,938,643 feet lumber.

Woollen mills, 2, using 3,500,000 pounds wool.

Cotton mills, 2, using 110,000 pounds cotton.

Railroads, —, with 362⅔ miles rails laid.

Coal mines, 63,350 tons; all in Contra Costa county.

Total assessed value of property in the State for 1866, $197,789,107, as follows: Real estate, $93,379,737; improvements, $15,306,817; personal property, $88,239,582.

Total population, (estimated,) 470,597; registered votes, 119,481; poll tax collected, $288,494.

The report also gives the following figures relative to 1867, the present year: Land cultivated, 1,793,286 acres; of which 846,377 acres were in wheat, and 354,873 acres in barley. The largest wheat counties were: Solano, 160,000 acres; Santa Clara, 150,000; and San Joaquin, 91,790 acres. The largest barley counties were: Santa Clara, 40,000 acres; San Joaquin, 30,616 acres; and Sacramento, 30,000 acres. It will be seen from the foregoing that only 18,959 acres of additional land has been cultivated in 1867. The total of wheat and barley in 1866 were 1,163,366 acres, while in the present year there were 1,201,250 acres, showing an increase of 37,884 acres cultivated in those grains. The greatest disparity between the two years is in the different apportionment, viz: in 1866 there were 690,745 acres wheat, while in 1867 there were 846,377 or 155,632 acres, or over one-fifth more land. In barley, in 1866, there were 472,621, and in the present year 354,873 acres; a decrease of 117,748 acres, or fully one-fourth less.

No statistical information of the crops of 1867 (the present year) have as yet been received by the surveyor general from county assessors, so that no estimates made can be safely relied on. As the crop of wheat in 1867 was harvested from fully one-fifth more land, it is probable that as much was produced as in the preceding year, although the grain was somewhat less in weight per bushel than in other harvests. The demand for wheat has been great, at very remunerative prices, and supplies have been brought forward more freely than in previous years The total receipts of the harvest of 1867, at this port, from July 1 to December 23, amount to 4,265,008 sacks, or 7,108,346 bushels, of which 3,157,083 sacks, or 5,261,805 bushels, have been exported up to December 25, 1867. Large as our exports of wheat have been, it is highly probable that they will be much increased next year. Our farmers have learned by experience that summer fallowing and dry ploughing insure good crops, even in dry seasons, and the practice has been largely indulged in this year. The high price of wheat has also stimulated capitalists to engage in its culture, and many thousands of acres of land are being broken up for the first time, and will be put in that grain. In fact the desire to plant wheat seems to have become a mania, and land has been rented at higher rates than was ever known before. What the aggregate of new land planted in wheat will be I have no means of knowing further than the practice is general in all the valley counties in the State. In one county, (Contra Costa,) I am credibly informed that two tracts of land, of 5,000 acres each, have been rented, and will be sown in grain for the first

ime; and many farmers are sowing all their land in wheat, with exception of small plats hat they require in other grains, for their own use.

So far the winter has been most favorable for planting, and I believe that at the present time as many acres are already in wheat as produced the entire crop of 1867. I judge that there will be fully 150,000 acres of new land put in wheat before the season passes; and, unless very adverse weather prevails, the crop of wheat in California, in 1868, will be fully 30,000,000 bushels, which will make her the first wheat-producing State of the Union.

This will, doubtless, seem strange to the people of the Atlantic States, who have looked upon California as most valuable for her mineral wealth; but I predict that in less than a decade she will, in agricultural wealth, be the richest State, for her products are more varied and valuable than can be found in any similar area of land in the Union.

The great want of California, at present, is population, for there is room, and profitable employment, for 100,000 additional workers, within the coming year.

Give the necessary population, and California will astonish the world with the variety, quantity, and value of her agricultural products.

As you will see by reference to the statistics, in the first portion of this letter, we are making great progress in the production of hops, silk, butter, cheese, wool, wine, and brandy, while the cultivation of semi-tropical fruits, olives, and nuts, is attracting considerable attention.

From extensive personal observation derived the past year, I am inclined to agree with the opinion of the surveyor general, that scarcely a single product he has named in the list is reported in sufficient quantity. The number of vines, and the amount of wine made, I feel certain are largely understated. As an illustration, Sonoma county is put down as having only 2,830,195 vines, and made 199,030 gallons wine. I happened to be in Sonoma valley last October, when the township assessor had just completed his assessment of vineyards, and heard him state that he only assessed vineyards as having 600 vines per acre, and did not count the cuttings of 1866 at all. I visited most of the vineyards in the valley, and found that there were from 660 to 1,400 vines planted to the acre, or, on an average, fully 900 vines—just one-half larger quantity than had been assessed. I had occasion, a short time since, to make inquiry regarding the wine crop of Sonoma valley, for 1866, of Arpad Haraszthy, formerly of that place, but now of San Francisco. Mr. Haraszthy made a memoranda of the vintages of the principal wine-growers in the township, which footed up 360,000 gallons, for 1866, and calculated there must have been considerable more made in small lots, which he could not remember. Sonoma township makes from two-thirds to three-fourths of the wine produced in the county, which would make the latter about 500,000 gallons, instead of 199,030 gallons, reported.

Of the other crops of 1867, the following quantities have been received in San Francisco up to date, (December 26,) viz:

Barley, 379,123 sacks, 100 pounds each; oats, 182,356 sacks, 100 pounds each; and 350,781 sacks potatoes, the sacks averaging 140 pounds each.

With exception of potatoes, all the above are consumed in this city, or exported, the other portions of the State producing their own supplies, besides shipping largely to other points, by land, in Nevada and adjoining Territories.

The above is but a slight sketch of the productions of California, of which her people feel justly proud. The total population of the State, in 1866, was estimated at 470,597. Of these, fully 130,000 were in this city, 12,000 in Sacramento, 5,000 in Marysville, 6,000 in Stockton, 3,000 each in San José, Santa Clara, Nevada City, Grass Valley, and Placerville; making a total of 168,000 people in nine towns. The other interior towns, villages, mining camps, the inland and coast navigation, and railroads in course of construction, will absorb fully 100,000 more; leaving an agricultural population (counting men, women, and children) of about 200,000, who have produced the amount of articles derived from the soil as before stated. If any similar number of farming population in any other State of the Union have or can make as good a showing as the result of their industry, the people of California would like to know it, when they will try again.

From the San Francisco Commercial Herald and Market Review we extract some valuable and interesting statistics of the crops of California for the past year as compared with the preceding year. The total receipts and exports of wheat, flour, oats, and barley of San Francisco for the year ending December 31, 1867, foot up as follows:

		Receipts.	Exports.
Wheat	sacks	6,003,676	4,659,285
Flour	barrels	470,388	519,309
Oats	sacks	261,363	10,782
Barley	sacks	725,783	68,232

The following table exhibits the receipts and exports of flour and wheat since July 1, 1856:

	RECEIPTS.		EXPORTS.	
	Flour.	Wheat.	Flour.	Wheat.
	Qr. sacks.	*Sacks.*	*Barrels.*	*Sacks.*
July 1, 1856, to July 1, 1857	152,509	340,030	36,541	22,257
July 1, 1857, to July 1, 1858	141,825	243,052	5,387	3,801
July 1, 1858, to July 1, 1859	274,216	433,002	20,577	123
July 1, 1859, to July 1, 1860	365,628	985,026	58,926	381,766
July 1, 1860, to July 1, 1861	455,115	2,160,723	197,181	1,529,924
July 1, 1861, to July 1, 1862	426,260	1,361,218	101,652	851,844
July 1, 1862, to July 1, 1863	638,352	1,864,652	144,883	1,043,652
July 1, 1863, to July 1, 1864	402,408	1,846,118	152,633	1,071,292
July 1, 1864, to July 1, 1865	538,941	527,881	91,479	25,360
July 1, 1865, to July 1, 1866	716,053	2,198,158	279,554	1,039,518
July 1, 1866, to July 1, 1867	1,192,275	5,079,791	465,337	3,636,194
July 1, 1867, to Deccember 31, 1867	779,444	3,926,314	198,183	2,644,019

Of the 2.644,019 sacks of wheat exported during the six months ending December 31, 1867, 2,333,342 sacks went to Great Britain, and 239,106 sacks to New York; and of the 198,183 barrels of flour exported, 43,947 barrels were sent to Great Britain, and 57,770 came to New York.

The close of the year 1867 found the market for all grades of wool at a lower point and with less movement than at any time since 1861. The receipts for the year were as follows: Spring clip, 6,206,930 pounds; fall clip, 2,421,356 pounds; from Oregon and elsewhere, 859,400 pounds; pulled wool, 1,000,000 pounds. Total, 10,487,686 pounds, against 9,487,686 in the preceding year. Exports in same period, 7,221,327 pounds. An increase of twenty-five per cent. is anticipated in the California clip of 1868.

It is estimated that there are now 1,000 dairies in California, with a product of about 5,000,000 pounds butter and 2,500,000 pounds cheese in 1867. Marin county is the chief butter-producing county of the State, there being no less than 3,500 cows, divided into 17 dairies, grazed on a single rauch consisting of 75,000 acres. There are 100 dairies in the county, and the average yield is one pound of butter daily or 200 pounds for the season for each animal. The increased production of butter and cheese greatly reduced the importations for 1867, the imports of butter being little more than half the amount of preceding year.

The following table gives the destination and value of all merchandise and produce exported in 1867, in comparison with 1865 and 1866:

To—	1865.	1866.	1867.
New York, &c	$6,270,412	$5,744,384	$6,760,378
Great Britain	1,175,658	2,609,262	8,318,642
Mexico	2,082,704	1,703,201	1,992,862
South America	541,538	381,132	770,509
Hawaiians islands	748,142	894,891	665,366
China	1,233,732	1,518,178	1,325,336
British Columbia	1,257,029	1,073,347	978,993
Japan	122,061	123,702	811,063
Australia, &c	546,808	2,666,455	62,999
Other countries	575,322	588,466	779,755
Total	14,554,406	17,303,018	22,465,903

The exports of treasure for the same period foot up as follows:

To New York	$23,355,903 45
To England	5,841,183 99
To France	1,283,235 73
To China	9,031,504 35
To Japan	641,949 52
To Panama	372,551 70
To Central America	171,980 00
To Hawaiian islands	57,032 45
To Mexico	42,000 00
To Valparaiso	723,450 97
To Tahiti	500 00
To Victoria	155,000 00
Total in 1867	41,676,722 16
Total in 1866	44,364,393 05
Decrease in 1867	2,688,100 89

The combined exports of treasure and merchandise during 1867, as compared with 1865 and 1866, were as follows:

	1865.	1866.	1867.
Treasure	$45,308,228	$44,364,394	$41,676,292
Merchandise	14,355,399	17,303,018	22,465,903
Total	59,663,627	61,667,412	64,142,195

To the above amount of treasure should be added about $6,000,000 shipped east by the United States sub-treasurer, making the total $47,676,292, and the aggregate of treasure and merchandise $70,142,195.

GREENSAND MARL AS A MANURE—(Continued.)

The marls of the State of Maryland, for the purposes of examination into their composition or value, may be conveniently classed as follows:

1. Containing shells or carbonate of lime in considerable amount.
2. Containing a preponderance of the true greensand element—glauconite.

That is, these marls may be valuable either as containing potash, in the glauconite constituent, or carbonate of lime derived from the presence of the fossil shells. Those varieties which contain the glauconite are the most valuable, and the nearer the approach of those to the standard of the New Jersey marls, as given in the last communication, the more desirable are they as manures, since potash is more desirable as a manure element than lime, because more costly when purchased by the farmer, and not usually found in any amount in mineral substances used as manure, while, on the other hand, lime carbonate can be derived from many sources and at comparatively cheap rates. The greensand particles being much heavier than the calciums or other constituents of the marl, are easily separated by washing, when the relative amounts of them may be

determined. Thus, a specimen of marl from near Marlborough, Maryland, furnished by washing—

Dark greensand grains	45 79
Shelly particles and clay	54.21
	100.00

Now many agriculturists would consider this marl rich in possessing the lime element so abundant, whereas its real value is in the amount of greensand, which, in the proportion above, would yield between five and six per cent. of potash, estimated in an uncombined form; five per cent. of this form of potash would represent eight and one-third per cent. of pure carbonate potash, so that the above amount of greensand grains would yield in 45.7 pounds about five pounds of pure carbonate, or just 100 pounds of the same pure salt to the ton of marl as now constituted. As the shelly particles were found to yield forty-five per cent. of carbonate of lime, each ton would yield nearly 900 pounds of mild lime. The analysis would thus show that the valuable ingredients in one ton of this marl are 100 pounds of pure carbonate potash and 900 pounds of carbonate of lime.

In a ton of farm manure (cow) there are obtainable not quite three pounds of carbonate of potash, so that the amount of alkali afforded by this marl is greatly superior to that given by cow manure; and as an average crop of potatoes raised on one acre removes from the soil about 102 pounds of carbonate of potash, there is in one ton of this marl nearly a sufficient amount of that salt to replace what the potato removed, supposing the manure to be evenly spread over the whole surface of the ground.

In the lower counties of Maryland the marl beds extend and cross the Potomac into Virginia, near Aquia creek, along which into the interior it may be traced in Stafford county. The following is the constitution of a marl from the Maryland side of the river at that point. By elutriation, or washing, in 100 parts of dry matter:

Fine yellow clay	48.00
Calcareous matter, (shells)	18.00
Sand	10.00
Greensand marl, impure	24.00
	100.00

And by chemical analysis it yielded in 100 parts:

Quartz and fine sand	58.5
Alumina and peroxide of iron	9.2
Carbonate of lime	17.2
Carbonate of magnesia, traces.	
Soluble saline matter containing $\frac{3}{4}$ of one per cent. of potash	0.3
Moisture and loss	11.8
	100.0

The proportion of potash in one ton of this marl is about twenty pounds of pure carbonate, corresponding to about twelve per cent. of pure glauconite in the marl. The carbonate of lime being seventeen per cent., the total quantity per ton of these two elements would be 20 pounds of pure carbonate of potash and 170 pounds of carbonate of lime. This marl, therefore, has one-fifth the money value of the one from near Marlborough.

T. A.

THE POTATO BUG.

We have received from Mr. J. S. Little, Rei, Ripley county, Indiana, the following communication in regard to remedies for the potato bug, (*Lytta*,) which are worthy of trial:

Take sawdust and coal oil, (that used for burning,) about one bushel of the former to half a gallon of the latter; mix well together and sow broadcast, commencing on one side of the field, and as the ground is gradually covered the bugs will be driven out. The operation should be repeated as often as the insects make their appearance. This was tried with other remedies in 1866.

Make a weak brine of common Kanawha salt, one and a half pounds to two and a half gallons of water, to be sprinkled over the vines after sunset, that they may have the night to take up the salt. If the brine is too strong it will cause the tops to wilt. Three applications will prove it a sure remedy. This was tried in 1867, alone, and proved effectual.

[NOTE.—The above remedies may be very good, but great care should be taken in the use of salt, as the remedy might be worse than the disease.]

T. G.

COMPARISON OF IMPORTS OF DRY GOODS.

The following is an unofficial statement of the imports of dry goods into New York in three successive Januarys:

	1866.	1867.	1868.
ENTERED FOR CONSUMPTION.			
Manufactures of wool	$3,740,464	$1,680,183	$573,838
Manufactures of cotton	2,181,451	1,625,857	645,633
Manufactures of silk	2,177,813	943,349	1,011,850
Manufactures of flax	1,798,390	954,847	496,704
Miscellaneous dry goods	839,912	632,234	432,027
Total entered for consumption	10,738,030	5,836,470	3,160,052
ENTERED FOR WAREHOUSING.			
Manufactures of wool	$2,313,860	$2,182,140	$742,515
Manufactures of cotton	1,108,648	1,720,379	474,220
Manufactures of silk	827,835	988,480	285,623
Manufactures of flax	648,349	917,864	321,216
Miscellaneous dry goods	132,369	283,539	135,733
Total entered for warehousing	5,031,061	6,092,402	1,959,307
Total entered at the port	15,769,091	11,928,872	5,119,359
Total withdrawn from warehouse	$3,775,612	$3,060,973	$1,604,974
Add entered for consumption	10,738,030	5,836,470	3,160,052
Total thrown on the market	14,513,642	8,897,443	4,765,026

The falling off in imports of manufactures of woollens is significant and gratifying. The total amount thrown upon the market in January was but

$1,059,489, against $2,970,028 in January of 1867, and $5,153,967 in January of 1866.

In seven months past there has been a decrease of $9,000,000 in value of these imports as compared with the same period of the previous year, and $14,000,000 as compared with a similar period of the previous year.

It is to be hoped that this diminution will be continued.

EXTRACTS FROM CORRESPONDENCE.

Shepherdstown, Jefferson county, West Virginia.—The following is a summary of the agricultural products of this county for the past year, as furnished by our correspondent, Dr. H. C. Evans:

Products.	Bushels.	No. of acres.	Average yield.	Price Jan. 1, '68.	Total value.
Indian corn	465,990	15,533	27.5	$0 90	$419,391 00
Wheat	236,716	20,584	11.5	2 37	551,016 92
Rye	10,430	1,043	10	1 45	15,123 50
Oats	37,365	1,366	27.5	0 55	20,660 75
Buckwheat	600	50	12	1 30	780 00
Potatoes (Irish)	17,100	190	90	0 90	15,390 00
Potatoes (sweet)	10	.2	50	1 50	15 00
Turnips	2,000	10	200	0 50	1,000 00
Beans	75	5	15	2 50	187 50
Sorghum (gallons)	3,552	74	48	0 80	2,841 60
Wine (gallons)	350	3.5	100	2 50	875 00
Leaf tobacco (pounds)	1,250	5	250	0 12	150 00
Hay (tons)	6,708	5,215	1.29	16 00	107,380 00
Total		44,078.7			1,134,811 27

Quite an encouraging exhibit for an indifferent season.

THE LUMBER TRADE.

Bay county, Michigan.—The following figures show the extent of the lumber business in this county during the year 1867, being the aggregate returns from twenty-three business firms: Lumber, 160,077,253 feet; lath, 21,622,775; logs, 159,608; total value, $2,639,627; number of men employed, 703; value of mills, $1,207,000; lumber, &c., on hand, 26,805,000 feet. Mills generally begin about May 1, and shut down November 15.

AGRICULTURE IN THE SOUTH.

Macon, Georgia, January 2, 1868.—I have been pretty well over the Atlantic States. In North Carolina the crops of cotton and corn were light, and there will be much suffering in the spring among the laboring population, from the fact that the planters will be unable, from their own impoverished condition, to supply food or labor. In South Carolina the crops were generally better, but still there will be a deficiency in food and means to employ labor another year. In Georgia and Alabama, both cotton and corn have done well, except in particular localities, and sufficient breadstuffs have been made to support the hands while planting and cultivating a larger surface to both cotton and corn the coming season. Contracts are now being made for the year, and there is not only an abundance but a surplus, and wages are low—not lower, however, than future prospects necessitate. Prime hands get six dollars per month

and rations. Many plantations are being worked on shares—one-half or one-third, as the parties find their own provisions. There is a marked improvement in the condition of the negro, and when the political troubles are settled it will be still more preceptible. As an agricultural people the South has made progress the past year slowly, but still they are in a better condition, from the fact that they have a greater amount of provisions, and are gradually becoming more self-sustaining. They are beginning to understand that their true prosperity is in making cotton a secondary crop. Could they be relieved of their terrible load of debt the country would soon be more prosperous than ever, for I do not know of any section of the Union that would so soon recuperate its wasted energies. Planters are already preparing for spring planting, and in less than two weeks plans will be in motion for the corn crop. L. C. P.

Lauderdale county, Mississippi.—I cultivated ten acres of sorghum last year. The yield was satisfactory considering the labor expended, and it is believed that the crop will pay, the season giving ample time to ripen, and the plant growing luxuriantly. I am making arrangements to plant forty acres the ensuing season, and several of my neighbors will grow small patches.

Pike county, Mississippi.—From the difficulty of controlling labor there will be less cotton planted this year than heretofore. A general determination prevails to raise everything needed for home consumption. The cotton cultivated will be more from the force of habit than with the expectation of profit, for even with hands at fifty dollars a year and board cotton cannot be raised at present prices, burdened with the government tax. Should the present year be tolerably propitious the South will be hereafter self-sustaining.

Giles county, Tennessee.—For the past four years cotton has been a specialty in this county. Last year the crop was a failure, or nearly so. This year we have made a fine crop, but the prices are a failure. It costs from fourteen to fifteen cents per pound to grow cotton here, and it is now netting but seven cents per pound. * * As a consequence, there has been a larger amount of wheat sown than I have ever known before. It has been mostly sown in cotton land, and is now looking remarkably well, and at present prices will be very remunerative. I have never known a year when there was a better crop of everything than was made the past season in this county, and had cotton netted us twenty cents per pound we would have been in a prosperous condition. As it is, we are dependent, money scarce, and no demand for our surplus mules and pork. I fear there will be a good deal of suffering among the freedmen. There will not be one-fourth the acreage of cotton planted this year as last season; hence many laborers are out of homes and are not disposed to work for wages. Anticipating fair prices for their cotton, our planters run in debt for dressing, and nine-tenths of those in this county are unable to pay their debts. There is a general disposition among our farmers to raise more of the small grains, grasses, &c., and the large land-owners are wanting to sell and reduce their farms to two or three hundred acres. Lands in this county are very rich, water and timber in great abundance, the finest facilities for manufacturing, and as fine a climate as in the United States. We need manufacturing establishments, cotton and woolen, labor-saving machinery, and steady, reliable, and intelligent laborers, and only grow cotton as a surplus.

Orangeburg county, South Carolina.—There has been much wheat sown, and it is looking well. The great depreciation of cotton prices will largely augment the cultivation of grain crops this year. I do not think there will be more than half as much in cotton as last season. Provisions are more abundant than last year, but still there is too great a disposition to shun agriculture or to carelessly prosecute it. It is much to be regretted that our people are so little disposed to give attention to the culture of rice, a very remunerative employment at present prices. There might be a great deal raised if attention were given to it. Our people are entirely too careless about agricultural improvement.

FATALITY AMONG SHEEP.

Corpus Christi, Texas.—"During the past season, in many localities, through the months of August, September, and October," writes F. W. Shaeffer, "the sucking lambs have died in great numbers. Upon a post mortem examination, I found in the *abomasum*, or fourth stomach, a small fine red worm, about one inch in length, appearing to the naked eye sharp-pointed at both ends. Upon opening the stomach, I usually found them rolled up in the shape of a ball. The lungs of the lambs were diseased, the intestines watery, and without any fat upon the kidneys. The first evidence of their being affected is their lagging behind, generally commencing in the latter part of July. The skin loses color, the eyes become bloodless, and the lambs pine away from day to day, losing strength, until, in the course of a month or six weeks, they die. In many instances the entire crop of lambs have died out. Should any of those attacked by the worms be living when the northers commence, being poor and thin, they are killed off by the cold winds. The worms are found only in the lambs while sucking, or living upon milk, or shortly after being weaned. Generally all in the flock are affected more or less before it is known, too late to save them. The cause of their origin we have not yet been able to find out, although it is attributed by some to the lambs feeding upon the red sedge grass while it is young, tender, and watery. Upon mesquit grass ranges it has not yet made its appearance. Any information the department can give us through its numerous correspondents would be of great public benefit, not only to this county, but to a large portion of western Texas."

THE TAPPAHANNOCK WHEAT.

San Bernardino, California.—"The Tappahannock wheat received last fall has proved a complete success, the return being one hundred fold, and the quality raised superior to the seed sent. In this climate the variety is distinguished from all others by its dark-green color before it commences to ripen; soil, a coarse, sandy loam; no manure applied; potatoes raised on the ground the preceding year. Fig-trees and grape-vines were growing within twenty feet. I esteem it a valuable acquisition, and if I am fortunate this year, shall be able to dispose of at least seventy bushels among my neighbors."

THE LIVERPOOL WOOL TRADE.

The general and unprecedented depression of business which has prevailed throughout the year, with hardly any intermission, has been shared to a material extent by the English wool trade, none of the hopeful anticipations that were indulged in at the commencement of the year having been fulfilled. Although the British imports, and more especially the exports, of wool, as well as of woollen manufactures, show some increase of business over that of the year 1866, the home trade has been in the most languid state known for a long time. The tendency of prices of the raw material has been downwards from the beginning of the year, and at the close their range was lower than for many years. As an evidence of the advantage to American wool-growers of the increased tariff upon wools and woollens, we may state that the depression in the English trade is in a large measure attributed to "the high, indeed almost prohibitory, duties on manufactures and the raw material imposed by the present American tariff."

Taking the returns of the Liverpool Board of Trade, we find that the imports of wool during the eleven months ending November 30 are in the aggregate

about 4,000,000 pounds in excess of those of same period in 1866. The increase, however, is considerably larger if Australian and Cape wools alone are taken; but this is counterbalanced to some extent by a falling off in East Indian and wools from European ports. The total for eleven months amounts to 213,385,609.

The exports have been much larger than in the previous year, especially as regards colonial wools, of which to Belgium alone nearly 8,500,000 pounds, and to France, Germany, and other countries, about 11,000,000 pounds more than in 1866, have been sent. In foreign there is also an increase of about 3,500,000 pounds, while the only decrease is in domestic wools to France, which has taken 2,000,000 pounds less than in the preceding year. The total export of wool shows an increase of upwards of 22,000,000 pounds over 1866. Total exports of wool, 90,262,097.

With regard to the quantity of wool left for home consumption, it appears that, deducting the increase of 4,000,000 pounds in the imports from the 22,000,000 pounds of exports, there are 18,000,000 pounds less than in the previous year; and assuming that the domestic clip (estimated at 152,000,000 pounds) has undergone no material alteration, this would in some measure account for the fact that, notwithstanding the limited demand experienced for nearly eighteen months, stock, with perhaps one or two exceptions, have accumulated to much less extent than might be supposed.

Although the exports of woollen yarns and manufactures show considerable increase, a declared value exhibits a decline, the figures standing $120,253,210 for the first eleven months of 1867, against $120,531,835 for corresponding period of 1866, the falling off being consequent upon the depreciation of prices.

Australian and Cape of Good Hope wools have, as stated, arrived in greatly increased quantities, and have been brought forward in London at the quarterly public sales, (including withdrawals of former sales,) viz., 547,119 bales, including 130,963 bales Capes. About 240,000 bales were taken for export, chiefly to France and Belgium; prices have ruled lower at each succeeding series, but the decline has been most severely felt on faulty and inferior descriptions.

From Spain and Portugal, as in former years, only greasy and black wools were received, for which the demand has not been very active.

The imports of River Plate wools are somewhat less than in 1866, but equal to those of the three preceding years. Fine-washed, as well as greasy River Plate wools, are gaining favor more and more with British manufacturers, and the demand has been fair throughout the year.

The arrivals of alpaca have been less than in the previous year, and the principal sales were made in June, at other times the demand having been languid; and prices have suffered a great reduction since the 1st of January, 1867, when the highest quotation was 84 cts. per pound, while recent sales have been made at 52 cts. per pound. Sheep's wool from the west coast of South America arrived in increased quantities, and the stocks on hand have considerably increased, while prices have suffered a serious decline. Lima and Chili have been in fair request, and the reduction in value less marked.

A material falling off in the receipt of East India and Persian. The amounts offered at the quarterly sales of the year (including parcels withdrawn from former sales) reached only 68,893 bales, against 79,414 in 1866. These wools have participated in the general decline. Persian wools have been chiefly of the bastard kind, but little true-bred wool having come forward during the year, and even the former has been of low character. The quantity of unwashed East India has considerably declined.

Donskoi (Russia) wools have until recently maintained higher prices than they otherwise would by reason of the demand for shipment to this country, but late sales in London show a serious decline.

Egyptian and other Mediterranean wools have shared in the general reduction of value, though the demand appears to have equalled the supply.

The demand for Barbary wool has been dull and sluggish throughout the year, and prices have suffered accordingly.

The imports from Iceland show a decrease from the preceding year, but the stock left on hand at the beginning of the year supplied the demand until the new clip came in, and when the fresh imports arrived they shared the general decline.

Mohair has fallen materially in price, and has at no time within the past twelve months commanded much attention in the English market. Although the imports have been less than in 1866, stocks now amount to 4,500 bags, while its value has gradually receded from 92 cents this time last year to 60 cents per pound, its present quotation.

In domestic wools, instead of the improvement anticipated in the beginning of the year, prices continued to decline, until at clip time they had receded about fifteen per cent., and since then a still further decline of about fifteen per cent. has taken place, so that prices are now lower than at any time since 1856.

The imports of sheepskins from the River Plate district reach 8,783 bales. They have been in request, and fully maintained their value in proportion to that of wool.

LINSEED, LINSEED CAKE, ETC.

The following figures give the aggregate imports of linseed into Great Britain for the years named, indicating the immense manufacture and consumption of linseed cake and oil in the United Kingdom. The quantity for each year is given in quarters of eight bushels:

	Quarters.		Quarters.
1856	1,180,179	1862	1,088,472
1857	1,051,113	1863	1,104,578
1858	1,017,844	1864	1,434,973
1859	1,270,911	1865	1,435,414
1860	1,330,623	1866	1,158,736
1861	1,160,970	1867	1,100,000

The demand for seed throughout the past year has remained in excess of the supply. For next season large additional supplies are everywhere reported. The imports for the working season—from July 1 to June 30, 1867–'68—will probably be, in round numbers, 1,200,000 quarters. The aggregate import into the United Kingdom is made up of about 275,000 quarters from Calcutta and Bombay; 330,000 quarters from Petersburg; 31,000 quarters from Archangel; 52,000 quarters from Riga; 55,000 quarters from Memel, Dantzic, and other lower Baltic ports; 317,000 quarters from the Black sea; the remainder from the Mediterranean and sundries. The re-export is very little in excess of last year, and amounts to about 20,000 quarters.

The export demand for linseed oil has fallen off during the year, but has been counterbalanced by the increased home consumption. The aggregate exports for the past six years are as follows:

	Tons.		Tons.
1862	26,000	1865	37,000
1863	20,000	1866	25,000
1864	28,000	1867	20,000

The consumption of home-made linseed cake has been on the same extensive scale as in 1866, and the high prices of other feeding stuffs has caused a good trade in cake. The import of foreign cake of all descriptions nearly equals that of 1866, being 120,000 tons.

Rape-seed were in very large supply from the East Indies, and prices have been low throughout the year. Rape cake has been in large demand. The import of cotton seed amounted to about 93,000 tons, being about the same as in 1866.

MANURES IN GREAT BRITAIN.

The aggregate imports of bones into Great Britain for the year 1867 were about 7,000 tons against 7,400 tons in 1866. The imports from South America have fallen off, while those from other parts have increased. The whole stock on hand at the end of the year did not reach 200 tons. The supply of bon ash has been fully equal to the demand, and owing to large arrivals from Rio Grande prices have not fluctuated more than $1 25 per ton. Imports of bone ash, calcined bones, and pottery ash, exceed 10,000 tons, and the stock of bone ash in first hands is about 1,200 tons.

The imports of nitrate of soda reached 27,000 tons for the year, but the quality of many of the cargoes has been inferior.

Of Peruvian guano there has been imported 14,415 tons, and 3,394 tons of Upper Peruvian.

Of brimstone 10,115 tons imported, and only about 100 tons on hand at the close of the year.

We annex the current prices of the various articles of manures, &c., named, on December 31, viz: Bones, common grinding, $27 50 to $28 12; legs, $27 50 to $30 62; shanks, $32 50 to $33 75. Bone ash, ordinary, for manufacturing, $20 62 to $22 50 per ton on 70 per cent.; calcined for pottery ware, $26 25 to $30 per ton. Animal charcoal, $21 50 to $22 50 per ton on 70 per cent. Brimstone, best thirds, $35 per ton. Nitrate of soda, $2 62 to $2 75 per cwt. Muriate of potash, $41 25 per ton on 80 per cent. Borate of lime, $4 25 to $4 50 per cwt. Sulphate of ammonia, $62 50 to $70 per ton. Gypsum, ground, free on board in British channel, $3 75 per ton; ditto, on spot, $6 25 to $7 50 per ton. Salt, common, $2 65 per ton. Linseed cake, English, $57 50 to $60 per ton; American, in bags, thin oblong, $55 to $56 25 per ton. Cotton-seed cake, undecorticated, $32 50 to 33 75 per ton; ditto, decorticated American, $45 to $46 25. Rape cake, English, $30 to 32 50 per ton. Guano, Peruvian, $61 87 to $66 25 per ton; ditto, ditto, damaged and discolored, $50 to $55; ditto, Upper Peruvian, $33 12 to $33 75; ditto, Madden Island, $17 50 to $30; ditto, Ichaboe, $45. Acid, sulphuric brown, 148 to 150 degrees, without carboys, $20 to $21 25 per ton; ditto, muriatic, ditto, $2 50 to $5 per ton.

PRICES OF FLOUR IN LONDON.

The following were the prices of flour on the first of January, in London, in shillings, four of which represent a dollar very nearly:

	s.	*d.*
Flour, per 280 pounds, town-made, delivered to the baker	58	64
Country marks	46	55
Russian	44	56
American and Canadian fancy brands, per 196 pounds	40	42
American superfine to extra superfine	35	37
American common to fine	34	35
American heated and sour	35	38

BRITISH IMPORTS OF RUSSIAN WHEAT.

The exports of Russian wheat to Great Britain were very heavy last year, having amounted to November 30th to 13,186,521 cwt. against 7,765,207 cwt. to the corresponding date of 1866, and 7,127,624 cwt. in 1865. The following figures show the total deliveries since 1852 :

	Cwt.		Cwt.
1852	3, 178, 808	1860	5, 638, 298
1853	4, 740, 571	1861	4, 512, 999
1854	2, 196, 302	1862	5, 751, 018
1855	.....	1863	4, 534, 305
1856	4, 290, 989	1864	5, 119, 234
1857	3, 060, 959	1865	8, 093, 879
1858	2, 652, 940	1866	8, 937, 199
1859	3, 836, 993	1867, to November 30	13, 186, 521

IMPORTS OF FLOUR INTO GREAT BRITAIN.

The imports of flour into the United Kingdom in the eleven months ending November 30, shows some falling off, the receipts from abroad having been 3,040,350 cwt., against 4,403,133 cwt. in the corresponding period of 1866, and 3,136,091 cwt. in 1865. The total imports of flour in the fifteen years ending Decembeer 31, 1866, were as follows :

	Cwt.		Cwt.
1852	3, 865, 173	1860	5, 086, 220
1853	4, 621, 506	1861	6, 152, 938
1854	3, 646, 505	1862	7, 207, 113
1855	1, 904, 224	1863	5, 218, 977
1856	3, 970, 100	1864	4, 512, 391
1857	2, 178, 148	1865	3, 904, 471
1858	3, 856, 127	1866	4, 972, 280
1859	3, 328, 324	1867 (to November 30,)	3, 040, 350

The following figures show the proportion of the above imports received from France :

	Cwt.		Cwt.
1852	880, 833	1860	1, 751, 043
1853	854, 730	1861	460, 775
1854	219, 783	1862	790, 040
1855	88, 196	1863	1, 367, 938
1856	69, 841	1864	1, 813, 855
1857	327, 114	1865	3, 044, 823
1858	1, 628, 248	1866	3, 640, 320
1859	2, 698, 186		

CONDENSED MILK IN EUROPE.

The consumption of "condensed milk" is said to be largely increasing in England, and its manufacture is becoming quite an important interest among Swiss

dairymen. The process of manufacture differs little, if at all, from the American process, save in the use of beet sugar instead of cane sugar; Dr. Liebig recommending the former on the ground that its preservative qualities are as good and the price cheaper than cane sugar, while in saccharine properties it is stated to be equal to the other sugar. The process of the Anglo-Swiss company, as stated by Mr. Merriman, before the food committee of the Society of Arts, is simply abstracting the watery particles from the milk and the addition of the sugar. It is claimed that the milk thus prepared, after it has been open six months, is in no way spoiled, though dried to a great extent, and that the milk so prepared will bear the ordinary changes of temperature without injury. It is sold in canisters containing the equivalent of half a gallon of good milk. Dr. Liebig estimates that the addition of five parts of water will produce a quality equal to the original Swiss milk, and the richness is varied according to the quantity of water added. For each canister the quantity of sugar is about one-third of a pound, but less is required when used for domestic purposes. A reduction of the quantity of sugar would endanger the preservation of the article when sent to a warm climate. The factory of the Anglo-Swiss company is situated on the Lake of Zug, a short distance from Zurich. The milk is brought in on men's shoulders and emptied into a large reservoir, and within one hour after, the whole quantity is put under the process of condensation. The preparation takes place so quickly after the delivery at the works that no change can take place. The Swiss authorities are very rigid in measures with regard to the audulteration of food, and especially milk, but milk is so cheap in Switzerland that there can be little advantage in adulteration. Each farmer's milk is tested, however, a sample being set aside to see if the cream rises. All that is done with the milk is to deprive it of the water. Microscopic observation shows that the substance of the milk after condensation is unchanged, and analysis of the water abstracted shows that the original properties of the milk are all retained. After the milk has been placed in the vessel it is heated by steam, and the milk is evaporated *in vacuo* at a low temperature. The whole process is completed in about two hours. As soon as the gauge indicates that the evaporation is completed, the steam is turned off, and the mass of milk is put into the canisters and sealed up, ready for use.

ROQUEFORT CHEESE.

A cheese factory at Roquefort is called a cave. It is niched high up in the head of the rocky table-land, where the sheep brouse in artificial meadows and herbs abound which are peculiarly beneficial to their milk, but where only the native flocks of the country flourish to perfection. Merino sheep from Spain have been introduced, and failed. The increased demand for cheese has tempted speculators to extend their operations, but to no purpose. About 400,000 sheep and lambs appear to be all that Roquefort and its neighborhood can sustain. They cannot be multiplied—their pastures cannot be increased. The sheep are milked twice a day. The milk is instantly carried to the dairy and strained, left for an hour under a covering of linen, then warmed nearly to a boiling point, or to a middle degree. It is next partly skimmed for butter, and so on, through many delicate processes until it comes from the mould complete. Complete. but not finished, for now the cheeses have to be turned over twice a day, dried, warmed, sprinkled with bread crumbs, which produce a moist-like growth in them, or with powdered cheese or wheat flour, and then inoculated by means of a bit of old cheese put into the new one to leaven it. After all this ceremony the Roquefort is ready for the cave, whither it is conveyed with the utmost care, not to say tenderness, registered and received, treated with a little salt, and then dis-

posed in piles of three. Aveyson and Herault, in the immediate vicinity, with natural caverns in abundance, have tried to imitate Roquefort, but the scent and flavor communicated by the Roquefort caves are inimitable. The cultivators of the district realize from this single branch of industry eight millions of pounds annually. This, briefly, is the art and mystery of Roquefort cheese.

PRUSSIAN AGRICULTURE IN 1867.

An official publication recently made enables us to give the results of the harvest in the several provinces of the kingdom of Prussia as compared with the crops of the preceding year. The system adopted by the Prussian government for the collection of these statistics is the same as followed by this department, with the exception of the use of the figures 100 instead of 10, to represent the average or preceding crop, the decimals showing the extent to which the product, as estimated, exceeds or falls short of the crop with which it is compared. The averages of the whole kingdom are as follows: Wheat, .78; rye, .74; barley, .90; oats, .98; pulse, .89; potatoes, .82; thus proving that throughout Prussia the crops of wheat and rye have only been about three-fourths of an average crop; and that while barley, pulse, and potatoes have been somewhat more productive, oats alone have nearly approached the average. The following additional averages are given: Rape seed, .70; beet root, .81; lupins, 1.04; from which it will be seen that the growth of lupins as an article for feeding cattle has been very advantageous during the past year. Returns are also given of the various kinds of straw that may be available, as follows: Wheat, .88; rye, .82; barley, .89; oats, 98; peas, .94; buckwheat, .83. These figures serve to confirm the returns made of the grain produced, for although from an excess of moisture during a part of the growing season the proportion of straw has been increased, the quantity secured is less than an average.

VARIOUS MATTERS.

The total exports of cotton up to the 1st of February are 510,000 bales to Great Britain, and 246,000 bales to the continent of Europe, against 426,000 and 69,000 bales same time last year, by which it appears that the continent has this season taken direct from our ports 177,000 bales in excess of last year.

Mr. P. T. Quinn, of New Jersey, gives the following as the amount of seven years' sales of the product of a row of thirty Duchesse d'Angouleme pears, the seven crops being the yield of eight years: The first crop, the trees eight years old, $120; second, $139 41; third, $156 17; fourth, $201 28; fifth, $267 49; sixth, $310 20; seventh, $705; total, $1,900 55. The row last year produced ninty-four bushels of marketable fruit, which sold at higher prices on account of the scarcity of peaches.

The total amount of coal mined in the United States in 1867 is estimated at 25,800,000 tons. The coal trade in Pennsylvania has not been so unprofitable since 1861 as during the past year, it being stated that there has been an average loss to the producer on the whole trade.

The total consumption of sugar is estimated at about 2,035,000 tons per annum, or fifteen pounds per head for the 312,972,000 souls from whom returns can be obtained. The United States and Great Britain are the largest consumers, using 1,420,000 tons annually, averaging about forty-one pounds to each inhabitant. The average in France, Spain, Italy, Belgium, and Switzerland is something over twelve pounds, with a total consumption of 500,000 tons. The Teu-

tons are third, consuming 230,000 tons, or an average of about seven pounds. The sources of supply are at present so numerous, and the cultivation of sugar can be so largely extended, and the crop is so remunerative, that there is a prospect of a continued increase in the use of this product, as the wealth and civilization of communities increase, until the present figures become insignificant. The growers of sugar, therefore, need have no fear of extending cultivation too far, as on the American and British scale of consumption the production might be increased three-fold.

At a recent sale of short-horned cattle in Victoria, Australia, fourteen bulls were disposed of at an average of over $440 per head—the highest bringing $790. The oldest was only fifteen months old, and the youngest three weeks. The average price of fifty-seven cows and heifers was nearly $315—the highest $740. Of the cows, many had long since passed their prime, and several of the heifers were quite young.

Professor McCall's report on the dairies and cattle-sheds of Glasgow, and the losses by cattle-disease within the boundaries of that city in 1866, states that the direct loss, in money value, from rinderpest, in Glasgow, during the year, amounted to nearly $45,000; from "puerperal fever," $35,000; pleuro-pneumonia, $273,300; murrain, $36,000—the greatest loss from pleuro-pneumonia, lung disease and murrain being among Irish and other travelled cattle, which had been hurried to the railway stations, thrust from the railway trucks to the holds of the steamers, and there kept for thirty or forty hours huddled together without food or water, and almost without air to breathe.

METEOROLOGY.

[Compiled in the Department of Agriculture, from the reports of observers for the Smithsonian Institution.]

DECEMBER, 1867.

Table showing the highest and lowest range of the thermometer, (with dates prefixed,) the mean temperature and amount of rain, (in inches and tenths,) for December, 1867, at the following places, as given by the observers named. The daily observations were made at the hours of 7 a. m. and 2 and 9 p. m.

Stations, &c.	Counties.	Observers.	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain and melt'd snow.
MAINE.				°		°	°	*In.*
Steuben	Washington	J. D. Parker	27	44	20	—16	17.3	6.10
Barnard	Piscataquis	Edwin Pitman	28	36	10	—20	9.5	1.80
West Waterville	Kennebec	B. F. Wilbur	26	44	12	— 7	16.4	1.75
Gardiner	do	R. H. Gardiner	26	44	11	— 7	18.6	1.89
Lisbon	Androscoggin	Asa P. Moore						2.60
Cornish	York	Silas West	26	43	12	— 9	16.4	3.30
Cornishville	do	G. W. Guptill	26	41	9	— 8	17.0	2.18
Averages							15.9	2.80
NEW HAMPSHIRE.								
Stratford	Coos	Branch Brown	27	39	12	—22	9.5	2.75
North Barnstead	Belknap	C. H. Pitman	26	46	9	— 5	20.0	1.49
Averages							14.8	2.12
VERMONT.								
Lunenburg	Essex	H. A. Cutting	26, 27	40	19	—25	9.8	1.78
North Craftsbury	Orleans	Edward P. Wild	26	40	12	—14	15.8	2.83
Randolph	Orange	Charles S. Paine	26	42	11	—16	15.0	1.11
Middlebury	Addison	H. A. Sheldon	26	44	12, 13	—13	13.0	1.21
Averages							13.4	1.73
MASSACHUSETTS.								
Kingston	Plymouth	G. S. Newcomb	26, 28	50	19	— 5	27.8	3.42
Topsfield	Essex	S. A. Merriam	26	47	9, 11	— 3	25.9	1.07
Lawrence	do	John Fallon	27, 28	59	9	— 2	22.9	3.45
Georgetown	do	S. A. Nelson	27	50	10	— 6	23.0	1.53
Newbury	do	John H. Caldwell	27	48	9	— 2	22.3	.....
Milton	Norfolk	Rev. A. K. Teele	26	47	9, 19	0	22.9	2.67
North Billerica	Middlesex	Rev. E. Nason	27	48	11	— 8	22.7	.....
West Newton	do	John H. Bixby	26	50	11	— 1	20.1	3.15
New Bedford	Bristol	Samuel Rodman	26	51	9	5	26.9	3.90
Worcester	Worcester	Jos. Draper, M. D	27	54	14	— 3	23.0	2.07
Mendon	do	Jno. G. Metcalf, M. D	27	46	9	— 3	21.0	.....

Table showing the range of the thermometer, &c., for December—Continued.

Stations, &c.	Counties.	Observers.	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain and melt'd snow
MASS.—Continued.				°		°	°	*In.*
Lunenburg	Worcester	Geo. A. Cunningham	28	45	9	— 8	20.7	1.73
Amherst	Hampshire	Prof. E. S. Snell	26	46	14	— 3	22.6	1.51
Richmond	Berkshire	Wm. Bacon	27	44	14	—12	19.6	2.63
Williams College	do	Prof. A. Hopkins	27	46	14	—11	21.3	1.85
Averages							22.8	2.42
RHODE ISLAND.								
Newport	Newport	Wm. H. Crandall	26	48	9	2	26.6	5.47
CONNECTICUT.								
Pomfret	Windham	Rev. D. Hunt	26	46	14	0	22.0	1.86
Columbia	Tolland	Wm. H. Yeomans	26	54	14	— 2	24.7	.....
Middletown	Middlesex	Prof. John Johnston.	26	53	12	1	24.4	2.49
Colebrook	Litchfield	Charlotte Rockwell	27	44	14	—11	19.1	.....
Averages							22.6	2.18
NEW YORK.								
Moriches	Suffolk	E. A. Smith & daugh's	26	59	19	0	31.0	2.98
South Hartford	Washington	G. M. Ingalsbe	26	52	12	—11	19.7	1.30
Troy	Rensselaer	Jno. W. Heimstreet	26	47	13	— 3	23.3	1.23
Garrison's	Putnam	Thomas B. Arden	26	52	13	— 2	25.0	1.58
Throg's Neck	Westchester	Miss E. Morris	26	50	13	6	28.0	.....
Deaf and Dumb Inst.	New York	Prof. O. W. Morris	26	50	13	6	28.0	2.56
Columbia College	do	Prof. Chas. A. Joy	26, 27	50	12	3	29.0	1.22
Flatbush	King's	Eli T. Mack	26	49	13	5	29.8	1.35
Newburgh	Orange	James H. Gardiner	26	52	14	0	27.0	1.34
Minaville	Montgomery	Prof. D. S. Bussing	27	44	14	—20	13.4	2.47
Gouverneur	St. Lawrence	C. H. Russell	27	44	19	—19	14.8	0.96
North Hammond	do	C. A. Wooster	27	48	12, 13	—12	16.8	2.94
South Trenton	Oneida	Storrs Barrows	22, 28	42	14	—22	16.9	6.63
Cazenovia	Madison	Prof. Wm. Soule	27	46	13	—17	20.0	2.22
Oneida	do	S. Spooner, M. D.	27	53	14	—14	21.7	3.74
Houseville	Lewis	Walter D. Yale	27	48	{ 9, 12, 13, 19	} —14	16.4	3.25
Depauville	Jefferson	Henry Haas	27	46	12	—11	18.6	2.41
Theresa	do	S. Gregory	.....	.....	19	—20	.....	1.85
Oswego	Oswego	Wm. S. Malcolm	27	49	14	—10	23.4	3.78
Palermo	do	E. B. Bartlett	27	45	14	—24	19.3	5.73
Nichols	Tioga	Robert Howell	27	51	13	— 7	24.1	.....
Geneva	Ontario	Rev. Dr. W. D. Wilson.	26	56	13	— 4	24.7	0.70
Little Genesee	Allegany	Daniel Edwards	27	53	14	—18	23.9	2.05
Buffalo	Erie	Wm. Ives	27	52	14	2	25.6	2.96
Averages							22.6	2.52
NEW JERSEY.								
Paterson	Passaic	Wm. Brooks	26	51	12, 13	5	27.7	2.20
Newark	Essex	W. A. Whitehead	26	50	14	2	26.9	2.05
New Brunswick	Middlesex	Geo. H. Cook	26	49	13	7	27.6	1.27
Trenton	Mercer	E. R. Cook	28	52	13	8	32.4	3.24
Burlington	Burlington	John C. Deacon	27	55	14	10	31.8	1.80
Moorestown	do	Thos. J. Beans	27	54	14	8	28.5	1.83
Mount Holly	do	M. J. Rhees, M. D	27	54	14	10	30.5	.....
Dover	Morris	Howard Shiver	26	49	13	1	27.1	.....
Haddonfield	Camden	Samuel Wood	27	56	14	9	29.9	3.95

Table showing the range of the thermometer, &c., for December—Continued.

Stations, &c.	Counties.	Observers.	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain and melt'd snow.
NEW JERSEY—Con.				°		°	°	*In.*
Newfield	Gloucester	E. D. Couch	26, 28	55	13, 14	11	34.1	.....
Greenwich	Cumberland	R. C. Sheppard	26	52	13, 14	13	31.9	0.89
Vineland	....do	John Ingram, M. D.	25	53	13, 19	10	30.2	2.26
Averages							29.9	2.17
PENNSYLVANIA.								
Nyces	Pike	John Grathwohl	26	51	14	—22	22.9	2.34
Fallsington	Bucks	Eben'r Hance	27	49	14	9	29.0	3.50
Philadelphia	Philadelphia	Prof. J. A. Kirkpatrick	27	52	14	10	31.7	2,86
Germantown	... do	Thomas Meehan	28	50	13	7	28.1	.....
Horsham	Montgomery	Miss Anna Spencer	27	47	14	6	28.1	1.20
Dyberry	Wayne	Theodore Day	26, 27	46	14	—27	21.3	1.85
Whitehall	Lehigh	Edward Kohler	26	48	14	— 7	27.3	1.38
Parkesville	Chester	F. Darlington	26	50	13	5	27.8	2.81
Reading	Berks	J. Heyl Raser	27	51	14	1	29.6	.....
Ephrata	Lancaster	W. H. Spera	28	50	14	4	28.7	2.47
Harrisburg	Dauphin	John Heisely, M. D.	27	48	14	4	28.5	1.05
Ickesburg	Perry	Wm. E. Baker	27	56	14	—12	27.5	2.86
Lewisburg	Union	Prof. C. S. James	27	48	14	—23	26.0	2.77
East Tioga	Tioga	E. T. Bentley	27	56	13	—14	26.0	1.80
Pennsville	Clearfield	Elisha Fenton	22, 25, 27	44	13	— 6	22.1	4.54
Franklin	Venango	Rev. M. A. Tolman	27	62	13	—10	26.5	.....
Connellsville	Fayette	John Taylor	27	68	13	— 9	29.4	.....
New Castle	Lawrence	E. M. McConnell	27	61	13	1	28.3	.....
Canonsburg	Washington	Rev. W. Smith, D.D.	.....	.....	13	—15	21.0	2.02
Averages							27.0	2.39
MARYLAND.								
Woodlawn	Cecil	Jas. O. McCormick	28	54	12, 13	6	29.2	2.41
Catonsville	Baltimore	George S. Grape	28	50	13, 14	6	28.3	.....
Annapolis	Anne Arundel	Wm. R. Goodman	27	61	13, 14	14	36.2	2.98
St. Inigoes	St. Mary's	Rev. J. Stephenson	28	62	13	13	36.1	.....
Emmittsburg	Frederick	Eli Smith	27	55	14, 19	10	29.2	.....
Mt. St. Mary's Coll.	....do	Prof. C. H. Jourdan	27	52	14	9	29.7	3.01
Averages							31.5	2.80
VIRGINIA.								
Cape Charles L. H.	Northampton	Jean G. Potts	26	60	13	20	34.5	2.92
Surry C. H.	Surry	B. W. Jones	27	71	13	18	40.7	5.18
Comorn	King George	E. Tayloe	.....	.....	.....	.....	.....	2.74
Lynchburg	Bedford	C. I. Meriwether	28	61	1	19	39.5	.....
Snowville	Pulaski	J. W. Stalmaker	27	64	1	6	34.8	1.69
Averages							37.4	3.13
WEST VIRGINIA.								
Romney	Hampshire	W. H. McDowell	27	62	14	6	34.0	.....
Grafton	Taylor	W. H. Sharp, M. D.	22	60	13	6	35.9	3.50
Cabell C. H.	Cabell	C. L. Roffe	27	71	1	14	39.4	4.60
Burning Springs	Wirt	Rob't H. Bliven	27	71	.....	.....	.....	.....
Averages							70.8	4 05
NORTH CAROLINA.								
Goldsboro'	Wayne	E. W. Adams, A. M.	28	75	14	19	45.0	2.75
Oxford	Granville	Wm. R. Hicks, M. D.	28	66	14	14	39.0	4.00

Table showing the range of the thermometer, &c., for December—Continued.

Stations, &c.	Counties.	Observers.	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain and melt'd snow.
N. CAROLINA—Con.				°		°	°	*In.*
Raleigh	Wake	Rev. F. P. Brewer	28	73	14, 16	17	41.7	2.95
Albemarle	Stanley	F. J. Kron	28	76	9	13	43.3	5.40
Statesville	Iredell	Thos. A. Allison	28	68	1, 9	12	38.8	2.50
Asheville	Buncombe	E. I. Aston	27, 28	67	13	13	41.1	.....
Averages							41.5	3.52
SOUTH CAROLINA.								
Aiken	Barnwell	John H. Cornish	26	75	13	28	49.9	.....
Gowdysville	Union	Charles Petty	28	78	1	21	49.2	.....
Averages							49.6	.....
GEORGIA.								
Atlanta	Fulton	Chas. Deckner	26	73	1	19	46.1	4.99
ALABAMA.								
Moulton	Lawrence	Thos. M. Peters, A. M.	27	70	1	22	47.7	3.35
Carlowville	Dallas	H. L. Alison, M. D.	27	78	1	30	56.3	3.80
Fish River	Baldwin	W. J. Van Kirk	6, 28	76	1	32	.....	2.20
Opelika	Lee	J. H. Shields	27	75	1	25	52.6	.....
Greene Springs	Hale	J. W. A. Wright	27, 28	77	1	28	54.5	2.41
Averages							52.8	2.94
FLORIDA.								
Jacksonville	Duval	A. S. Baldwin	27	80	1	35	60.1	0.93
Gordon	Alachua	H. B. Scott	6, 28	78	9	35	59.5	.....
Lake City	Columbia	Galen M. Fisher	25	76	14	32	57.8	.....
Averages							59.1	0.93
TEXAS.								
Waco	McLellan	Edw. Merrill, M. D.	11	85	31	20	61.7	2.30
Austin	Travis	J. Van Nostrand	11	86	31	28	61.2	1.80
Gilmer	Upshur	J. M. Glasco	25	85	31	30	58.9	.....
Averages							60.6	2.05
LOUISIANA.								
New Orleans	Orleans	Robert W. Foster	4, 27	78	31	42	61.2	1.80
MISSISSIPPI.								
Grenada	Yalabusha	Albert Moore	22	84	13	29	55.8	.....
Natchez	Adams	Wm. McCary	6, 17	79	31	30	60.9	2.52
Averages							58.4	2.52
TENNESSEE.								
Tusculum College	Green	S. S. and Rev. W. S. Doak.	27	70	13	15	42.0	.....
Lookout Mountain	Hamilton	Rev. C. F. P. Bancroft	27	70	13	18	43.6	.....
Franklin	Williamson	Jos. M. Parker	27	70	14	25	45.2	.....
Memphis	Shelby	Edw. Goldsmith	27	76	13, 19, 31	26	47.4	1.81
Averages							44.6	1.81
KENTUCKY.								
Chilesburg	Fayette	Sam'l D. Martin, M. D.	11	57	13	10	35.3	6.24
Louisville	Jefferson	Mrs. L. Young	27	70	13	8	36.5	5.62
Lexington	Fayette	S. R. Williams	27	67	1, 13	11	39.0	6.69
Averages							36.9	6.18

Table showing the range of the thermometer, &c., for December—Continued.

Stations, &c.	Counties.	Observers.	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain and melt'd snow.
OHIO.				°		°	°	*In.*
New Lisbon	Columbiana	J. F. Benner	25, 27	68	13	—13	39, 7	2. 90
Steubenville	Jefferson	Joseph B. Doyle	27	66	13, 14	8	31. 0	.....
Painesville	Lake	E. J. Ferris	25	59	14	6	27. 0	6. 05
Milnersville	Guernsey	Rev. D. Thompson	27	58	13	— 1	32. 8	3. 55
Cleveland	Cuyahoga	Mr. & Mrs. G. A. Hyde	25, 27	55	13	— 4	28. 0	3. 16
Do	do	T. A. Smurr, M. D	27	62	13	0	29. 7	.....
Wooster	Wayne	Martin Winger	27	66	13	—13	29. 2	.....
Gallipolis	Gallia	Alex. P. Rodgers	27	65	1	10	34. 2	4. 37
Kelley's Island	Erie	Geo. C. Huntington	27	51	12	9	28. 9	2. 33
Norwalk	Huron	Rev. A. Newton	25	59	13	— 3	28. 9	3. 09
Greenwich Station	do	Mrs. M. M. Marsh	27	63	1, 14	8	30. 4	3. 05
North Fairfield	do	O. Burras	27	60	19	3	.....	.....
Marion	Marion	Miss Kate E. Johnson	27	61	13	6	27. 8	4. 10
Williamsport	Pickaway	John K. Wilkinson	27	73	13	10	32. 0	9. 04
Toledo	Lucas	J. B. Trembly, M. D.	27	60	13	2	28. 3	3. 28
Kenton	Hardin	C. H. Smith, M. D	6, 27	60	7, 30	10	37. 3	5. 06
Urbana University	Champaign	M. G. Williams	27	64	13	4	28. 6	4. 09
Hillsboro'	Highland	J. McD. Mathews	27	63	13	9	30. 7	3. 83
Bethel	Clermont	Geo. W. Crane	27	64	13	6	31. 5	5. 50
Cincinnati	Hamilton	Geo. W. Harper	25	58	13	10	32. 8	3. 07
Do	do	R. C. Phillips	27	68	13	18	37. 4	3. 66
College Hill	do	John W. Hammitt	27	66	13	8	33. 6	5. 40
Averages							31. 4	4. 20
MICHIGAN.								
Monroe City	Monroe	Miss F. Whelpley	27	58	19	— 2	26. 9	2. 13
State Agricult'l Col	Ingham	Prof. R. C. Kedzie	27	50	13	0	25. 3	1. 34
Litchfield	Hillsdale	R. Bullard	25	51	13	— 8	24. 0	1. 42
Northport	Leelanaw	Rev. Geo. N. Smith	25	43	12	8	23. 8	0. 58
Otsego	Allegan	Milton Chase, M. D	25	58	13	2	30. 0	.....
Alpena	Alpena	J. W. Paxton	6	40	7	11	23. 8	1. 88
Central Mine	Keweenaw	Dr. S. H. Whittlesey	25	32	7	— 5	15. 1	8. 70
Ontonagon	Ontonagon	Edwin Ellis, M. D	25	34	8	4	18. 1	.....
Averages							23. 4	2. 68
INDIANA.								
Aurora	Dearborn	Geo. Sutton, M. D	27	69	15	3	32. 9	4. 00
Vevay	Switzerland	Chas. G. Boerner	27	72	15	11	34. 9	6. 40
Muncie	Delaware	G. W. H. Kemper, M. D	25, 27	57	15	— 5	29. 5	2. 40
Columbia City	Whitley	Dr. F. & Miss McCoy	25, 26	60	13	5	26. 4	0. 88
Indianapolis	Marion	W. J. Elstun, M. D	27	63	15	— 2	30. 4	3. 49
Merom	Sullivan	Thomas Holmes	27	61	13	7	31. 0	4. 40
Averages							30. 9	3. 60
ILLINOIS.								
Chicago	Cook	Samuel Brookes	25	60	23	4	28. 4	.....
Do	do	J. G. Langguth, jr	25	58	23	10	31. 6	1. 11
Golconda	Pope	Wm. V. Eldredge	27	72	15	15	39. 5	1. 60
Aurora	Kane	A. & E. D. Spaulding	25	52	23	0	26. 0	1. 29
Ottawa	La Salle	Mrs. E. H. Merwin	24	48	23	7	26. 9	1. 66
Winnebago	Winnebago	J. W. & Miss Tolman	25	45	23	— 6	21. 1	1. 03
Hennepin	Putnam	Smiley Sheppard	25	55	23	2	27. 0	.....

Table showing the range of the thermometer, &c., for December—Continued.

Stations, &c.	Counties.	Observers.	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain and melt'd snow.
ILLINOIS—Cont'd.				°		°	°	*In.*
Rochelle	Ogle	Daniel Carey	25	45	23	— 5	23.0	.....
Wyanet	Bureau	E. S. & Miss Phelps	25	56	23	0	25.6	1.05
Tiskilwa	....do	Verry Aldrich	24, 25	50	23	4	27.2	.....
Elmira	Stark	O. A. Blanchard	25	50	23	2	26.1	1.25
Peoria	Peoria	Frederick Brendel	25	52	23	— 7	28.6	1.21
Springfield	Sangamon	G. M. Brinkerhoff	31	74	14	10	31.8	.....
Waterloo	Monroe	H. Künster	25	70	18	12	36.8	.....
Dubois	Washington	Wm. C. Spencer	21, 26	60	18	17	35.0	3.45
Galesburg	Knox	Prof. W. Livingston	11	60	18	9	28.0	0.96
Mount Sterling	Brown	Rev. A. Duncan	25	58	18	6	30.2	.....
Augusta	Hancock	S. B. Mead, M. D	25	54	18	4	30.0	1.30
Ridge Farm	Vermillion	Dr. B. C. Williams	27	60	13	6	31.0	.....
Averages							29.2	1.45
WISCONSIN.								
Manitowoc	Manitowoc	Jacob Lüps	25	47	7, 29, 30	2	24.0	1.18
Plymouth	Sheboygan	G. Moeller	25	42	7, 8, 23	— 1	20.0	2.05
Milwaukee	Milwaukee	I. A. Lapham, LL.D	3	56	23	3	25.7	1.51
Appleton	Outagamie	John Hicks	25	46	7	0	21.4	1.24
Geneva	Walworth	Wm. H. Whiting	25	47	23	2	23.3	.....
Delavan	....do	Leveus Eddy	25	47	23	— 1	22.5	0.92
Embarrass	Waupacca	E. Everett Breed	24, 26	32	18	—22	18.8	2.40
Edgerton	Rock	Henry J. Shintz	24, 25	48	23	— 4	21.7	.....
Baraboo	Sauk	M. C. Waite	24	41	23, 30	— 6	19.7	3.19
New Lisbon	Juneau	J. L. Dungan	24	46	30	—11	19.3	.....
Galesville	Trempealeau	Wm. Gale, A. B	26	37	30	—18	.....	.....
Averages							21.6	1.78
MINNESOTA.								
Beaver Bay	Lake	C. Wieland	25	34	7	—18	13.8	0.71
St. Paul	Ramsey	Rev. A. B. Paterson	2, 9, 25	33	30	—14	15.5	0.84
Minneapolis	Hennepin	Wm. Cheney	25	34	30	—16	14.9	1.09
New Ulm	Brown	Charles Roos	9	44	18	—20	16.1	0.35
Averages							15.1	0.75
IOWA.								
Clinton	Clinton	Dr. P. J. Farnsworth	25	50	23	4	27.0	2.32
Davenport	Scott	D. S. Sheldon	25	45	23	— 1	22.8	2.22
Dubuque	Dubuque	Asa Horr, M. D	25	42	23	— 2	23.3	1.13
Monticello	Jones	M. M. Moulton	2, 24	40	23	— 4	21.2	0.65
Fort Madison	Lee	Daniel McCready	25	52	18	5	27.2	1.15
Guttenberg	Clayton	Jas. P. Dickerson	24	44	23	— 6	19.1	0.53
Ceres	....do	Jno. M. Hagensick	2, 25	50	22	3	22.5	.....
Mount Vernon	Linn	Prof. A. Collins	24	42	23	— 2	22.3	.....
Iowa City	Johnson	Prof. Theo. S. Parvin	24	44	23	— 2	24.3	1.34
Independence	Buchanan	Mrs. D. B. Wheaton	25	44	23	— 4	19.3	0.60
Do	....do	Geo. Warne, M. D	25	41	23	— 7	20.7	1.40
Waterloo	Black Hawk	T. Steed	10	42	23	0	22.1	.....
Marble Rock	Floyd	H. Wadey	25	43	30	— 5	20.7	.....
Iowa Falls	Hardin	N. Townsend	10	44	28	— 4	23.5	2.46

Table showing the range of the thermometer, &c., for December—Continued.

Stations, &c.	Counties.	Observers.	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain and melt'd snow.
IOWA—Cont'd				°		°	°	*In.*
Algona	Kossuth	Ph. Dorweiler	9	48	18	—11	18.8	.....
Do	do	James H. Warren	9, 26	38	18	—16	13.4	1.10
Dacotah	Humboldt	Wm. O. Atkinson	9	47	18	— 8	19.7	.....
Boonesboro'	Boone	E. Babcock	15	46	17, 18	— 9	23.1	1.20
Fontanelle	Adair	A. F. Bryant	26	58	18	— 4	26.8	1.45
Logan	Harrison	Jacob F. Stern	10	54	18	— 3	26.2	0.80
Whitesboro'	do	David R. Witter	10	51	17	0	24.5	1.23
Fort Dodge	Webster	C. N. Jorgensen	10	46	18	— 4	21.8	1.32
Burlington	Des Moines	Mrs. L. P. Love	25	68	23	7	28.5	.....
Averages							22.5	1.25
MISSOURI.								
St. Louis Univ	St. Louis	Rev. F. H. Stuntebeck	25	70	18	14	36.0	2.91
Allenton	do	A. Fendler	25	73	18	10	36.1	2.59
Hermitage	Hickory	Miss Belle Moore	24	67	18	8	38.6	0.69
Rolla	Phelps	Homer Ruggles	25	75	18	9	39.3	1.44
Harrisonville	Cass	John Christian	26	64	18	7	34.5	0.99
Oregon	Holt	Wm. Kaucher	16	72	18	5	34.0	1.40
Averages							36.4	1.67
KANSAS.								
Olathe	Johnson	Wm. Beckwith	26	66	18	8	29.0	0.13
Atchison	Atchison	Dr. H. B. & Miss Horn	16, 26	62	18	6	33.1	0.40
State Agricult'l Coll.	Riley	Prof. B. F. Mudge	26	64	30	15	35.1	0.51
Council Grove	Morris	A. Woodworth, M.D.	16	67	18, 31	8	37.0	0.50
Baxter Springs	Cherokee	Ingraham & Hyland	26	76	31	10	42.6	0.40
Leavenworth	Leavenworth	Dr. J. Stayman	26	64	18	6	34.1	0.71
Averages							35.2	0.44
NEBRASKA.								
De Soto	Washington	Charles Seliz	5	55	18	— 3	25.7	0.62
Glendale	Cass	Dr. A. L. & Miss Child	10	68	17, 18, 30	2	27.7	0.85
Dakota	Dakota	H. H. Brown	15	50	18	— 6	25.1	0.60
Omaha Agency	(Reserve)	Rev. Wm. Hamilton	5	52	18	— 4	29.0	0.80
Averages							26.9	0.72
UTAH TER.								
Great Salt Lake City	Great Salt Lake	W. W. Phelps	9	60	29	20	41.2	3.90
Wanship	Summit	Thomas Bullock	15	56	29	— 2	35.1	3.70
Averages							38.2	3.80

NOTES ON THE WEATHER, FOR DECEMBER, 1867.

[Compiled in the Department of Agriculture, from reports of observers for the Smithsonian Institution.]

Gardiner, Me.—The mean temperature of this month for thirty-one years is 22°; this year the first twenty days was only 13.5°, and of the month only 18.22°. No December so cold since 1859, and but five on record as cold as the present.

West Waterville, Me.—The first fourteen days the coldest for December in twelve years. The day following the great storm of Washington to Boston, (12th,) the clouds threatened, but it was "too cold to snow."

Lisbon, Me.—Month cold and uncomfortable; thawed in the sun on only three days, yet the ground was frozen only six inches deep on the 15th, whereas it is usually sixteen to eighteen inches.

Stratford, N. H.—Coldest December in ten years by 4°.

Lunenburg, Vt.—A cold but pleasant month. 18th, 3 a. m.—Earthquake felt in three distinct waves, passing from south to north, and lasting about thirty seconds.

Middlebury, Vt.—18th, 3 a. m.—Several shocks of earthquake, at intervals of three or four seconds, the whole lasting about twenty seconds. A person sleeping with the head to the south was rolled toward the east by it. From the papers it appears to have been more severe north of this, and in Canada.

Kingston, Mass.—A very cold month—5° colder than in 1866. From 12th to 16th almost incessant snows.

Kingston, Mass.—No sleighing till 17th, and not much wheeling since; yet not much snow at any time. Ponds, wells, &c., lower than usual.

Mendon, Mass.—Ten days' poor sleighing during the month.

Williams College, Mass.—No sleighing during the month.

Pomfret, Ct.—The coldest December in fifteen years. The last half was considerably warmer than the first.

Middletown, Ct.—The river closed with ice on the 9th.

Colebrook, Ct.—Frequent snow squalls during the month, but not more than four inches fell at any time.

South Hartford, N. Y.—Champlain canal closed on the 5th. Lake Champlain crossed by teams, from Grand Isle to Plattsburg, on the 18th—said to be the earliest on record. Several shocks of earthquake felt at 3 a. m. on 18th—a heavy jar, with a low rumbling noise. In Ogdensburg it was quite violent, shaking the firmest buildings, and lasting about two minutes; in Burlington lasting about thirty seconds; in Whitehall two distinct shocks, lasting about twenty seconds each, with an interval of about a minute between. At Fort Ann a house was shaken so violently that the door bell rang. It was felt in Fair Haven, Rutland, Dresden and Sandy Hill. The month was cold and dreary—little sleighing—the ground frozen to a great depth—springs and streams very low.

Troy, N. Y.—A slight shock of an earthquake reported in this city on the 18th, at 3 a. m. It was sensibly felt in Albany. The mean temperature of December lower than in any December in eleven years, and the amount of rain and melted snow the least since 1861.

Gouverneur, N. Y.—Earthquake on 18th, about 3 a. m., accompanied by a loud, roaring and rushing noise; vibrations regular, distinct, and about six in a second. Two fainter shocks followed at intervals of a few minutes, and a fourth was felt at 6 a. m. The vibrations seemed to be from northwest to southeast, while the shocks seemed to pass eastward. The shocks succeeding the first were felt rather than heard.

North Hammond, N. Y.—On the 18th, at 2.50 a. m., an earthquake—there

severe and distinct undulations, shaking strong buildings, breaking crockery and window lights, overthrowing wood-piles, &c., the whole lasting sixty-five seconds. It moved toward northeast. The year closes very dry; swamps dry, streams low, the St. Lawrence four feet below high water mark.

Minaville, N. Y.—The month very dry—wells failed in many places.

South Trenton, N. Y.—18th, 3 a. m., shock of an earthquake distinctly felt—duration some eight seconds—the first known in this county.

Oneida, N. Y.—18th.—Slight shock of an earthquake this morning, lasting about a minute.

Depauville, N. Y.—18th, 2.48 a. m., heavy shock of an earthquake from southwest to northeast, lasting about fifteen seconds. The trembling of the ground shook houses and opened doors. The noise lasted about a minute. The atmosphere was clear and calm; the undulations were horizontal. A shock or two preceded this one. This was the coldest December in thirty years.

Theresa, N. Y.—About 3 a. m. on the 18th heard a hissing or blowing sound, like a strong wind, though the air was calm. It was followed by a strong vibratory movement, shaking the house, and rattling doors, windows and furniture, lasting but a few seconds. The whole lasted one minute.

Palermo, N. Y.—18th, at 3 a. m., an earthquake shook houses, furniture, &c., lasting over a minute. It was a succession of waves, from south to north, most violent at first, and gradually diminishing in volume. This has been the coldest December in fourteen years.

Nichols, N. Y.—River frozen over the second time on the 9th, and open again on the 29th and 30th.

Geneva, N. Y.—The drought surpasses any ever known here. Rain since July, only 6.235 inches—less than half the usual average; for November and December, only 1.027 inch—less than one-fourth the usual average.

Buffalo, N. Y.—27th, slight shock of an earthquake at 3 a. m. Heavy thunder the same day at 4 a. m. The mean temperature of the month is below the December average for the past ten years. Passable sleighing from 9th to 22d. Loose floating ice in the lake from 16th to 22d.

Newark, N. J.—Temperature of the month 6° below the average of twenty-four years, and this not owing so much to extreme cold as to the number of cold days, especially in the first half of the month—the lowest temperature of only two Decembers of the twenty-four occurring so early. The storm of the 12th, from the violence of the wind and low temperature, proved more trying than any for many years, and extended throughout the middle and eastern States.

Trenton, N. J.—12th, heaviest snow-storm ever known here so early in the season.

Burlington, N. J.—12th, steamboats stopped, and river frozen over. 28th, ice broken up in the Delaware.

Dover, N. J.—Winter unusually early and severe. Streams low, wells and springs failing.

Greenwich, N. J.—12th, thermometer fell all day—severest rain, hail and snow-storm for eleven years. 28th, moles running, and caterpillars crawling.

Fallsington, Penn.—The past has been the coldest December since 1859, and with greatest quantity of snow—in all eighteen inches.

Philadelphia, Penn.—31st, storm of snow, (three inches,) which continued into the new year.

Dyberry, Penn.—7th, Delaware and Hudson canal closed. 13th, first sleighing—lasted till 27th. For three months previous to the 27th streams were very low, and many springs and wells failed.

Whitehall, Penn.—The average mean of the month is lower than any December in eleven years.

Reading, Penn.—About sixteen inches of snow fell this month—good sleighing from 12th to 25th.

Tioga, Penn—To the 12th the weather steady, moderately cold. 12th, severe snow-storm, with low temperature, unusual so early in the season. From 12th to 23d, moderately and steadily cold, with good sleighing. 27th, ice (eight inches thick) broken up in the river. Wells dry on uplands, and people suffering much inconvenience for water.

Pennsville, Penn.—The month mostly moderate; frequent rain and snow, but no very high water.

Franklin, Penn.—Allegany river closed on 12th, and opened again on 22d. Ground free from frost on 26th, and frozen six inches deep on 31st.

New Castle, Penn.—Snow-storm of unusual severity from northeast on 12th, with temperature of 13°. 31st, the grass coming out from under the snow as fresh and green as in September.

Woodlawn, Md.—Susquehanna at Port Deposit closed by ice from 10th till 28th; ice freshet from 28th till 31st. Good sleighing from 12th to 25th.

Emmittsburg, Md.—On 11th, commenced snowing and raining alternately until night, when it rained, hailed, and snowed, with strong wind from the east, until 10 p. m. on the 12th.

Cape Charles Light-house, Va.—Heavy thunder at 10 a. m. on 12th. Tide rose to unusual height on 13th, and very nearly swept over the island.

Surry C. H., Va.—12th, the whole day misty or rainy and calm; snow at 8 p. m.; windy and very cold, and so continued until 2 p. m. on 13th.

Snowville, Va.—3d, mountains covered with snow the first time this fall. 12th, rain all day; at 4 p. m. snow fell, scarcely to cover the ground.

Grafton, W. Va.—Snow-storms at intervals from 10th to 15th.

Burning Springs, W. Va.—Little Kanawha river rose six feet on night of 12th, allowing accumulations of petroleum (60,000 barrels) to be taken to market. Another rise of three feet on night of 25th. A remarkable gas-well at this place supplies the entire fuel for thirty wells, (some of them a mile distant,) eighty stoves, and light for every house.

Goldsboro', N. C.—Much thunder and lightning during night of 25th.

Oxford, N. C.—Light fall of snow on 1st—very early for this latitude—and rain and snow together on the 12th.

Albemarle, N. C.—Thunder-storm from southwest on 26th, forenoon. Up to 29th weather mild, and strawberries in bloom in old fields. On 29th, winter in earnest—snow, hail and sleet for two days; much stock must have perished in fields and woods.

Statesville, N. C.—At 4 a. m. on 12th, vivid, forked flashes of lightning, with heavy thunder south and southwest; thermometer at 52°. 31st, ground has not been frozen more than an inch; now free from frost.

Gowdysville, S. C.—December a mild month. On 30th moderate rain, changing to frozen rain, and lasting till 10 p. m. on 31st—perhaps the greatest amount of frozen rain that has fallen here in many years.

Atlanta, Ga.—Thunder-storm from southwest to northwest on 12th, at 3 a. m. to 7 a. m.

Moulton, Ala.—Not one fair day this month, though there has been little rain. Temperature mild, perpetual roses budding, and hyacinths, tulips, &c., pushing forth. On 11th, at 9 p. m., frequent lightning. On 12th, high winds from the west all day; storm on the seaboard.

Havana, Ala.—11th. Remarkable storm at night; for an hour lightning in the northwest was so vivid and continuous as to resemble northern lights. The sky overhead was almost clear, moon shining brightly, and air calm. Thunder faintly heard in the distance. After it passed around to the north, with every indication of a clear night and morning, at 12.30 a. m., on the 12th, the sky was suddenly overcast, and a violent gale sprung up, with rain, and thunder and lightning unusual for a winter storm. It lasted one hour.

The month has been unusually mild, dry, and cloudy, though with less than half the usual amount of rain.

Fish River, Ala.—From 17th to 29th, warm and dry; "oldest inhabitants" never saw so much warm weather, in the same time, at this season. The results are ripe dewberries and peach blossoms on 28th. No frost since 16th, and but little then.

Jacksonville, Fla.—Thunder-storm on the 13th.

Waco, Texas.—Mild and very dry until 29th, when it commenced raining, and in the night snowing, continuing through the 30th.

Austin, Texas.—Weather remarkably mild and "northers" moderate until 28th, at 5.30 p. m., when a severe "norther" set in. 29th, rain all day. 30th, about two inches snow. 31st, clear and cold.

Grenada, Miss.—Month generally unusually warm and cloudy, but free from rain and snow. 11th, at night strong wind, rain, hail, and heavy thunder.

Natchez, Miss.—11th, light rain at 6 a. m.; wind strong from southwest at noon; sharp lightning in the west and northwest at 9 p. m. 12th, severe storm from northwest last night, accompanied with lightning, thunder, rain, and terrific wind.

Lookout Mountain, Tenn.—12th, violent thunder-storm, with very high wind. 29th, remarkable storm, continuing till January 2, 1868; the rain congealed as it fell, and coated everything with ice, in some places three inches thick. Many trees broke off near the ground; nearly all lost limbs and branches. The temperature hovered about the freezing point until, on January 2, it suddenly rose, and this "coronation of winter" dissolved in a brisk, warm rain.

Memphis, Tenn.—High wind from west and northwest on the 12th, until 3 p. m. Snow on 30th and 31st, depth 6.25 inches; a greater quantity than fell in the last two winters. The past month has been very cloudy, compared with the small amount of rain.

Franklin, Tenn.—On 10th, at 7 p. m, the sky was suddenly obscured with clouds; wind blew from all quarters in a few minutes, with lightning, thunder, and rain. From 16th to 27th weather very mild; unfavorable to fruit buds. 29th, rain, sleet, and snow to the 31st, when snow was twelve inches deep, damp, and compact; the longest fall of snow since March, 1843. The thermometer for thirty-six hours only varied from 31°.5 to 32°.15.

Chilesburg, Ky.—Unusual amount of cloudy weather this month, yet, until the 22d, there was not water enough to raise the streams and fill the ponds. 31st, snowing, raining, and hailing all day; bushes and trees encased in thick ice.

New Lisbon, Ohio.—27th, lightning and thunder last night; frost out of the ground.

Steubenville, Ohio.—The snow of 11th, 12th, and 13th was sleety, with a strong wind, changing from south and southwest to northwest, northeast, and north.

Painesville, Ohio.—Frogs heard peeping on 27th.

Kelley's Island, Ohio.—12th and 13th, the most violent storm of snow and driving wind from northeast that has occurred in thirty years. 14th, lake covered with ice. The month remarkable for cloudiness, humidity, and great and sudden changes in the barometer.

North Fairfield, Ohio.—Severe snow-storm from northeast on 12th; probably twelve inches fell by the 13th. December very cold, with unusual amount of snow.

Marion, Ohio.—10th, 2 p. m., rain. 11th, 11 p. m., snow, continuing through 12th, with wind from northeast, and ending on evening of 13th.

Williamsport, Ohio.—Hail and rain on 17th, accompanied with thirteen heavy peals of thunder. Storms, with thunder, on 21st and 22d.

Kenton, Ohio.—On 12th, one of the most violent snow storms ever witnessed here.

Urbana, Ohio.—The mist and rain of 11th changed at night to snow, continuing through the 12th, with the wind a gale from north and northwest—the most violent storm remembered here. 25th and 27th, thunder each evening.

Litchfield, Mich.—6th, wind almost a hurricane from noon till 11 p. m.; uncommon for this section. Month closes with springs very low.

Northport, Mich.—The month mild, but unusually windy; but little snow has fallen. The bay and lake continue free from ice. The year closes with a beautiful day.

Central Mine, Mich.—The winter, so far, mild. The month stormy, with unusual snow—at present, four feet deep in the woods.

Ontonagon, Mich.—Lake Superior entirely open on 31st.

Richmond, Ind.—On 11th, p. m., rain; colder at 9 p. m.; turned to fine hail at midnight. On 12th, fell very fast, with snow driven by a hurricane from northeast most of the day.

Vevay, Ind.—12th, violent snow-storm from northeast from 6 a. m. to 11 a. m. On 22d, a. m., a hurricane of great violence from west and southwest, accompanied by lightning, thunder, hail, and rain; did much damage on land and water. From 15th to 19th, a great quantity of ice in the Ohio. On 20th, the first coal barge passed down; none had passed for six months on account of low water.

Columbia City, Ind.—There is, and for three months has been, a scarcity of water.

Indianapolis, Ind.—12th, rain last night changed to sleet, and, near day, to snow, lasting through the day, with strong wind.

Chicago, Ill.—Harbor open yet for navigation, but nearly all vessels laid up.

Aurora, Ill.—Month unusually fine; rivers low; muskrats have built in the channels of the creek and bayous.

Winnebago Depot, Ill.—On the 11th a. m., high wind from the northeast; at noon, fine rain and storm increasing till 6 p. m., when it changed to snow. Storm ceased before daylight on the 12th.

Hennepin, Ill.—Month exempt from storms and violent changes of temperature. Small streams so low that a fall to zero would stop their flowing. Much difficulty in watering stock.

Rochelle, Ill.—Light rain from northeast on 12th, freezing as it fell. Frequent rain and snow during the month, but small quantities each time.

Wyanet, Ill.—December uncommonly mild, with but few sunshiny days.

Springfield, Ill.—Month warm and dry. On Christmas very warm, with heavy thunder-shower from southwest.

Waterloo, Ill—On 11th, 6 to 7 p. m., rain with thunder and lightning, followed by snow at midnight.

Dubois, Ill.—Distant thunder in the west, at 8 p. m., on the 11th. The warmest December for several years, being 7°2 warmer than in 1866; and 7°5 above that of 1865.

Galesburg, Ill.—Except a day or two the month has been quite pleasant, with little snow and hardly any sleighing.

Augusta, Ill.—A drizzling rain on the 11th, turned to snow on 12th; about two inches of snow fell.

Milwaukee, Wis.—21st. Heavy snow-storm from southeast; 25th, snow gone.

Embarrass, Wis.—The month very windy, and sleighing at least twenty days earlier than last year.

Baraboo, Wis.—The mildest December for twenty years.

Clinton, Iowa.—Month very mild; but little rain or snow; about a week's sleighing, ending on 28th.

Dubuque, Iowa.—Mississippi frozen over on 8th; 12th, high wind all last night—snow much drifted.

Ceres, Iowa.—31st, ground frozen 2 feet; wells nearly all dry; snow gone; weather pleasant.

Waterloo, Iowa.—Wells and streams extremely low.

Marble Rock, Iowa.—The most beautiful winter weather I ever saw closes the year.

Ten miles southwest of Algona, Iowa.—Violent gale from north-northwest from 4.30 a. m. to 7 a. m., on 6th. On 11th, at 7 a. m., rain, which froze as it fell; 11 a. m., snow; 12th, in the night, snow; 13th, snow all day.

Algona, Iowa.—The latter part of the month remarkably pleasant.

Boonsboro', Iowa.—Month unusually mild; temperature 1° above that of 12 years past.

Logan, Iowa.—Very bland, pleasant weather all December and all fall; ground frozen eight inches; the Missouri frozen over on the 15th.

Hermitage, Mo.—Month remarkable for the almost entire absence of rain and snow, and the high temperature about Christmas.

Atchison, Kansas.—31st, no ice in the Missouri opposite this to impede navigation.

Manhattan, Kansas.—Dry, mild month; rivers not closed; farmers able to plough except on three days.

Council Grove, Kansas.—Pleasant Indian summer weather up to 11th, when snow whitened the ground. 21st, heavy thunder twice, with frequent lightning. 23d to 26th, inclusive, Indian summer weather.

De Soto, Neb.—18th. Missouri closed with ice; 31st, river lower than for many years.

Glendale, Neb.—Only 5.55 inches of rain and melted snow since July 18th. December very pleasant and dry; the mean temperature some 11° higher than the last eleven Decembers.

Dakota, Neb.—Missouri river closed with ice on 1st; springs and streams low, and roads dusty.

Omaha Agency, Neb.—Month generally pleasant. The river closed early in the month.

Great Salt Lake City, Utah.—This fall is unprecedented in Rocky mountain history. On the 20th and 21st, snow about three inches; 22d, rain from south and west and snow gone; 24th, 6 to 8 a. m., rain in torrents with westerly wind, melting snow in the mountains and causing floods that have done immense damage. A settler of 1847 never saw the streams so full. Christmas, mild but misty; 26th, rain; 29th, the ducts which convey water around the square in the city choked with ice for the first time this winter. Skating commenced; no snow around us, except away up in the mountains.

Wanship, Utah.—A most miserable, rainy, muddy, windy month. The grasshoppers (locusts) having used up nine-tenths of the grain, farmers have nothing to trade, which makes dull, hard times.